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3rd Quarter 1984

MID-SOUTH BUSINESS JOURNAL

MEMPHIS STATE UNIVERSITY
The FOGELMAN COLLEGE OF BUSINESS and ECONOMICS

Bureau of Business & Economic Research
The Fogelman College of Business and Economics
Memphis State University

MID-SOUTH BUSINESS JOURNAL

Volume IV, Number 4 October 1984

MEMPHIS STATE UNIVERSITY

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The MID-SOUTH BUSINESS JOURNAL is published quarterly by the Bureau of Business and Economic Research, Memphis State University, Memphis, Tennessee 38152, in the months of January, April, July, and October, as a service to the business community. Second-class postage paid at Memphis, Tennessee. POSTMASTER: Send address changes to Bureau of Business and Economic Research, Memphis State University, Memphis, Tennessee 38152.

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INFORMATION PROCESSING ISSUES FACING MID-SOUTH ORGANIZATIONS

Elmore R. Alexander, III[*]

Introduction

As John Naisbitt vividly describes in his recent book, *Megatrends,*[1] we are fast becoming a society driven by information processing. The changes which are occurring in the computer and telecommunications fields are affecting our lives both at work and at home in ways we could not have imagined ten years ago. These changes are especially salient for business organizations for whom this new information technology is both changing the way in which they do business as well as challenging their very survival.

In an attempt to develop an understanding of the nature of information processing issues facing organizations within the Mid-South area, this writer interviewed a sample of executives within area organizations. Approximately twenty individuals were interviewed from a wide range of organizations—public and private, service and manufacturing. The interviewees were primarily upper level executives and, while most had some information processing responsibility within their organizations, some were general managers who were not directly involved in information processing. All individuals were interviewed during the spring of 1984.

This article is a report on the results of those interviews. It will be organized into two major parts. Part one will summarize the major issues identified by the individuals interviewed. Part two will develop a set of conclusions and concerns for businesses based on these issues.

Information Processing Issues

Each interviewee was asked to identify current uses of information technology by his organization as well as examples of problems which were occurring because of the introduction of new information technology. In this section these descriptions are summarized into five categories—ATT divestiture, the integration of the computer into the organization, the application of interfacing technology, information storage and retrieval, and educational applications.

ATT Divestiture

During the past several months, massive disruption to organizational telecommunications have occurred. The problems evinced by the confusing new bills received for home telephones are only the tip of the iceberg of the changes which ATT divestiture has brought. The simplicity of dealing with a single entity, "Ma Bell," has been replaced with the complexity of dealing with a variety of former Bell System companies as well as a growing number of new service and equipment providers. Both charges and service delays have increased. Unfortunately, everyone seems to feel that conditions will get worse before they get better.

In response to these problems, Mid-South organizations are taking two approaches. The first response is an attempt to more effectively control telecommunications usage. This involves a variety of activities. Increased use of forecasting telecommunication needs can potentially minimize delays in system installation. More importantly, however, the use of computer-controlled telecommunication systems may optimize system usage and if not reduce overall costs, may at least slow cost increases.

The second response is to bypass the Bell System entirely. As costs increase and service becomes less dependable, it becomes increasingly attractive for an organization to develop its own telecommunication system. The events of the last several months have pushed a number of large Mid-South firms to the point of actively considering owning their own telephone systems. Since there are two major commercial data transmission systems (DCC and RCA Cylix) as well as two large private data transmission systems (Federal Express and Holiday Inns) located in Memphis, it is not hard to imagine companies within Memphis developing their own voice transmission systems.

The problems caused by the disruption of ATT divestiture are most salient to small- and mid-sized organizations. It should be apparent from the descriptions above that the options for minimizing the impact of divestiture are primarily available to larger organizations. The small organization has minimal ability to plan around the Bell System or to develop its own system. It may well be that the technology itself will come to the rescue; however, most estimates are that developments of this sort are at least ten years away. Thus, the foreseeable future will bring considerable disruption of telecommunication service for many small businesses.

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The disruptions caused by ATT divestiture were unquestionably the most frequently mentioned information processing issues by the interviewees. Almost everyone interviewed had a divestiture experience to describe. It seems reasonable to expect that this will be the major information processing issue in the Mid-South and the nation as a whole for the next several years.

Integration of the Computer into the Organization

This category relates to a wide range of issues concerning the use of computers in organizations. The issues here represent two related types of problems. In a sense the problems are merely extensions of traditional data/information processing concerns. On a second level, however, they represent new issues which arise due to technologies such as personal computers and 32-bit computer systems.

Perhaps the major issue in this area concerns the question of centralization versus decentralization of information processing activities. While the issue of whether information processing should be controlled by a large specialized department or by the various line and staff department users of the system has been a significant concern for a large number of years, the advent of mini- and micro-computers has given a new definition to it. Reasonably small departments within organizations now have the capability of having autonomous information processing at cost savings to the organization. This is a new twist on an old problem.

The proliferation of micro-computers (personal computers) in most organizations adds to the difficulties. Before most organizations knew what was happening, departments within them had bought many computers produced by a variety of manufacturers. The situation in the typical Mid-South firm (as has been the case in the nation as a whole) has been one of uncontrolled buying. Now organizations are faced with incompatible machines as well as potentially unnecessary purchases of computers. Several organizations have responded in recent months by placing moratoriums on the purchase of personal computers until an organization-wide plan for their use is developed.

A similar extension of a traditional problem involves training individuals to use computer systems. Increasing emphasis on decentralized information processing means that needs for computer skill training are expanding dramatically. The need to train employees in computer use skills like the centralization/decentralization issue is nothing new to organizations. The difference today is in both the magnitude of the training need and the need to train individuals who have previously had little or no contact with the computer. One approach to this problem taken by many Mid-South organizations is to establish "information centers"—units charged with helping individuals in the organization identify computer solutions to information problems in their jobs and with training these individuals to use the computer hardware and software which is identified.

The automation of offices themselves is a key concern of Mid-South organizations. The memory typewriter of ten years ago has been replaced either by a dedicated word processor or a personal computer. The changes, however, are far more dramatic than just a change in the type of equipment used. New technology is changing the very nature of both managerial and secretarial jobs. One interviewee, for example, explained that his biggest concern was that his engineers had become too involved in making their own charts and graphs with the graphics capabilities of the new office computer. This was not a problem before the introduction of the sophisticated and easy-to-use graphics capabilities of 32-bit micro-processors. Furthermore, technological change is continuing to provide new capabilities and challenges to the design and functioning of offices.

Equally important is the distinction between word processing and data processing. The movement of technology is such that any distinction between the two is becoming increasingly hazy. However, some organizations are maintaining a distinction which may result in problems as they try to integrate data with word processing in the future.

With all of these changes taking place, it should not be surprising that there is concern for the evaluation of the effectiveness of new computer systems. While the evaluation of early computer applications was simplified by the ease with which one could see the impact of the computer application both on the work being done and on the balance sheet, this is no longer the case. As increasingly complex activities lend themselves to computer applications, it becomes difficult to evaluate those applications. This is especially true for middle- and upper-level management applications. Several interviewees expressed their frustration in having no way of evaluating the impact of the introduction of computer applications.

Small organizations have a similar need for system evaluations. While the large organization has the potential to develop the expertise for evaluating computer systems, this is quite difficult for small organizations. Typically, they must depend on hired consultants to provide such evaluations. Unfortunately, there are few truly unbiased consultants available, because most consultants are also vendors for some type of hardware or software. Finding someone who can examine an organization's situation and needs and then recommend the appropriate hardware and software to meet those needs is a difficult task.

What can be concluded from all of these issues related to the integration of the computer into the organization is that the improvements in the computer have created almost as many problems as they have solved. What the ultimate impact of the computer will be on organizational structure and the nature of organizational jobs is yet to be determined. Critically, this is more than just an academic question. It represents a key concern of organizations both in the Mid-South and across the nation.

Application of Interfacing Technology

The information processing issue for Mid-South organizations, which is primarily technological, concerns the interfacing of computers. There are two aspects of this issue. One relates to the interfacing of one computer with another, while the other involves the concept of the "man-machine" interface.

As sophisticated as computers are at this time, it remains very difficult to connect various computers into a communications network. For example, hospitals have many elaborate diagnostic and monitoring devices which are unable to communicate with the hospital computer. As a result, someone is forced to physically record data from the device and then enter that data into the computer. This is both time consuming and expensive. Furthermore, as a result, it is very difficult to develop an integrated patient record on the computer.

An example of a similar problem concerns the use of computers by farmers. A computerized system is presently being developed to allow farmers to optimize crop productivity. The system requires linking the farm's personal computer and "Class A" weather station with a variety of computerized data systems throughout the agricultural system. One of the critical missing links in the system at present is a mechanism to interface the various computers involved.

A similar problem involves the interfacing of the proliferation of personal computers within organizations. The mechanism for accomplishing this interface is local area networks (LANs). However, finding the right LAN or one which is compatible is quite difficult. Furthermore, IBM's recent announcement that its LAN will not be available for at least two years is a major disappointment.

The other side of the coin on this issue is related to the ability of an individual to interface with a computer. The traditional mechanism for this interface has been the typewriter keyboard of a computer terminal. Apple Computer's introduction of the "mouse" in its Lisa and MacIntosh computers and Hewlett-Packard's introduction of the "touch screen" in its HP-150 computer represent the beginnings of a new approach to the "man-machine" interface which promises to make communicating with computers substantially easier. While the "mouse" and the "touch screen" are certainly easier interface mechanisms for the average user, a truly "friendly" computer has not been developed. Most individuals would expect a "friendly" computer to be able to understand normal spoken English as opposed to typed commands in a computer language. This type of voice recognition system coupled with an artificial intelligence system capable of understanding standard English is at a very experimental stage of development. However, the interface must reach this level of "friendliness" before the computer will become the universal tool that many individuals are predicting. These capabilities are a necessity before the computer can make inroads into the offices of high-level managers.

To summarize this area, the interviewees saw the problem of computer interfacing—both with other computers as well as with individuals— to be a significant barrier to the introduction of computers in additional applications in the workplace. Until these problems are resolved, the complete application of the computer to organization problems will be restricted.

Information Storage and Retrieval

Problems involving the storage and retrieval of information were also mentioned frequently by the individuals who were interviewed. An area of primary concern was that of database management. A number of related issues are involved. These range from the real-time processing of information to information search and retrieval systems.

The need for an understanding of real-time processing is especially important to Memphis organizations. Real-time processing where databases are immediately updated to reflect transactions being undertaken by the organization contrasts with batch-processing in which the databases are only updated periodically or after a certain number of transactions have been carried out. Banks represent a good example of organizations in which there is a significant need for real-time processing. Ideally, the transactions of tellers as well as consumer banking machines should be immediately entered into a bank's computers. At present, this is typically a batch-processing operation. Similarly, the reservation processing needs of an organization like Holiday Inns or the carrier dispatching needs of an organization like Federal Express dictate a real-time computer processing system. While real-time processing systems do exist, the level of sophistication of the systems is not adequate to meet all the current needs in this area.

A similar situation is faced in the area of information retrieval systems. Libraries as well as corporations face the difficulty of designing systems which can maximize the efficiency of information search and retrieval from computerized data systems. In this area, several interviewees indicated that while technology is currently available to improve systems dramatically, software is lagging behind. Additionally, an entire set of legal questions is being asked because of the creation of new possibilities by technological developments in this area.

As was the case with concerns in the area of the development of effective interface systems for computers, the problems involving information storage and retrieval represent limiting factors on the application of computers to organizational problems. Unquestionably, there are problems being faced by Mid-South organizations for which computers represent the only probable solutions. Unfortunately, those solutions are yet to be developed.

Educational Applications

Several interviewees mentioned the impact of computers on the educational system of the area as an important concern for their organization. The computer is likely to be a significant factor in the changes in our educational system in the coming decade. Not only will it be critically important to train students at all levels of the educational system to work with computers effectively, but the computer itself is likely to change the actual delivery of knowledge.

The first area is what is typically referred to as computer literacy. This problem is broader than just graduating students from the various levels of institutions within the area who are comfortable using the computer to solve job-related problems. It also entails developing effective and non-threatening means of training individuals within organizations to use a variety of computers.

The second area of concern goes further to consider how the computer might be used to assist in the delivery of training and educational programs. This ranges from the development of courseware for kindergarten through college classes to the design of computer-driven training programs in industry. The infancy of such applications of the computer was emphasized to this writer when he was told recently by the president of a firm which develops computer courseware for primary and secondary education that it costs one million dollars to develop a single course such as Algebra I. The introduction of more sophisticated "authoring" systems (computer programs which allow a relative computer neophyte to write a computer-based course) will certainly improve this situation. However, considerable work will have to be done before the potential of computerized learning can be realized.

Again, as was the case in previous issues, computer applications in education represent a significant untapped potential. The possibilities are for large improvements in the educational system relating to both traditional and continuing education programs. The state of educational applications in the Mid-South is not substantially different from the rest of the country. However, we could find ourselves at a considerable disadvantage should we not pursue this area as vigorously as do other areas of the country. Our ability to effectively educate the workforce both in a traditional fashion as well as in computer literacy will be tied closely to our economic viability.

Summary of Information Processing Issues

The five areas identified in the preceding sections represent a synopsis of the issues identified in the interviews conducted by this writer. While they are not exhaustive of the issues mentioned in all of the interviews, they do represent the major issues which were consistently mentioned by interviewees. While the interviews were limited to individuals from firms within the Mid-South, the issues seem quite similar to those being mentioned by managers in organizations across the country.

Conclusions

This section will examine the conclusions of a general nature which can be drawn from the issues identified in the preceding section. The first conclusion was alluded to in the summary of the issues—the issues faced by Mid-South managers are not substantially different than those faced by managers around the country. The concerns voiced by the interviewees were not substantially different than those described in most information systems magazines. It is important to note the surprising consensus among interviewees as to the key issues. While the terminology sometimes varied when one moved from the public to the private sector or from service to manufacturing firms, the identified problems were remarkably similar. It would appear that there is a true generic nature to the information processing problems being faced by organizations.

Second, the individuals interviewed seemed more concerned with the fact that information systems were not developing fast enough rather than that they were going too fast. This concern is represented by the description of issues relating to the application of interfacing technology, information storage and retrieval, and educational applications. These managers have seen the potential for computer solutions to a variety of organizational problems, and they are impatient for this potential to be realized. The danger is that some of these individuals will become disillusioned if the solutions are too slow in coming.

Third, the problems which the computer itself is causing for organizations appear to be cases of the computer outstripping traditional organizational structures. This is true of most of the issues discussed in the section on the integration of the computer into the organization. In this case, the technology has changed so dramatically and so rapidly that the organization has not been able to keep pace. The question of how to keep organizational structure abreast of developments in information technology should be studied carefully by both educational institutions and business organizations.

Fourth, the problems resulting from ATT divestiture are unique. They result not from technological change, but from governmental action. This is not to minimize their importance. For the individuals interviewed, these were the most significant problems they faced in the information processing areas. While it did not cause the problems, technological change represents the most likely solution to them. Unfortunately, these individuals did not foresee any solutions coming in the near future. As was mentioned before, this represents a significant problem for smaller organizations.

Finally, the answer to all of these problems seems to involve harnessing the computer's power to effect solutions. Whether the problem is one caused by developments in information technology or just the need for information technology to move faster to solve an organizational problem, the solution is likely to come from the ability to improve technology and its applications. This emphasizes the need for continued research into the nature of the problems.

The age of information is unquestionably upon us. This article has attempted to provide a picture of how this age is affecting Mid-South organizations. The issues being faced are both complicated and dynamic. One can almost certainly expect the situation to become more complicated in the future. However, the most likely solutions to any of the problems are in further developments in information technology.

FOOTNOTES

[1] John Naisbitt, *Megatrends* (New York: Warner Books, 1982).

MARKETING PRACTITIONERS' VIEWPOINTS TOWARD ADVERTISING: EXPENSE OR INVESTMENT?

*Robert P. Lambert and Donald W. Caudill**

Introduction

Ever since Joel Dean (1966) posed the question, "Does advertising belong in the capital budget?" marketing managers have debated the issue. Dean argued that advertising is an investment because it "is an outlay made today to achieve benefits in the future." The issue is not how the outlay is treated in conventional accounting, how it is taxed, or whether the asset is tangible or intangible, but how it affects the future. Since advertising contributes to future cash flows, Dean suggests advertising ought to be treated as an investment. Further, Wademan (1977) suggests that the common capital budgeting techniques such as net present value, internal rate of return, and cost/benefit analysis can be used to judge the desirability of advertising outlays. However, many companies choose not to use these techniques because of the difficulty in estimating the benefits derived from advertising.

Much of the debate over the issue of advertising's treatment of an investment or expense stems from two areas: (1) advertising is intangible, and the outlay is made during the period in which advertising is used; and (2) the tax treatment of advertising as an "expense" predisposes its user to think of it in terms of an expense and not an investment. First, advertising outlays are usually matched to the period in which the advertising is used. These payments are not stretched over a number of years as payments are for capital asset financing. Therefore, they tend to be expensed during the year in which they were used. Second, since advertising is treated as an expense by accountants, the user of advertising does not usually think in terms of a return on investment. Instead, advertising is usually viewed as a selling expense. For these reasons, it is probable that many users of advertising do not establish a rate of return for their advertising, nor do they attempt to measure revenue attributable to advertising.

Purpose of the Study

As can be seen from the above discussion, marketing managers held conflicting views regarding the issue of whether advertising is an expense or an investment. It was the purpose of the pilot study to examine marketing practitioners' viewpoints on this issue. Specifically, the following four hypotheses were developed:

Hypothesis 1: Marketing managers in large firms view advertising as an investment, while those in smaller firms are more likely to consider advertising as an expense.

Hypothesis 2: Marketing managers in firms that have a higher ratio of advertising to sales view advertising as an investment, while those with lower ratios consider advertising an expense.

Hypothesis 3: Marketing managers in corporations are more likely to view advertising as an investment than those managers in sole proprietorships/partnerships.

Hypothesis 4: Marketing managers in firms that market products are more likely to view advertising as an investment than are firms that market services and/or a combination of products and services.

Methodology

A questionnaire was developed to test the above hypotheses and to ascertain the current viewpoints of marketing managers regarding the treatment of advertising as an investment or expense. A telephone sample of business firms in a large southern city was conducted in the fall of 1983. A 70.0 percent response rate was obtained. The survey instrument contained both demographic and 4-point Likert-type statements designed to measure marketing managers' current thinking on the use of advertising during recession, the potential long-term benefits, rate of return, and other issues.

The majority of the marketing managers interviewed were employed by corporations and most often in a product-related firm (53.0 percent). The average percentage of advertising to sales was approximately 1.5 percent.

Results

Five of the Likert-type statements proved most helpful in measuring the viewpoints of marketing managers toward advertising (Table 1). Ninety-three percent of the respondents felt that advertising did provide long-term benefits to their companies, which supports the view that advertising is an investment. On the issue of reducing advertising during economic recessions, 86.0 percent of the respondents argued it should not, providing additional support that advertising is an investment. Slightly more than one-third of the respondents indicated that their companies had established a predetermined rate of return for advertising, while 41.0 percent felt that they could determine the amount of revenue attributable to advertising. Although these percentages are not significantly different, it can be inferred that many companies do, in fact, attempt to quantify their advertising objectives and results. Finally, 87.0 percent of the respondents felt that advertising generated sales beyond the current operating period, which indicates that they perceive advertising as an investment.

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Table 1
MARKETING PRACTITIONERS' VIEWPOINTS TOWARD ADVERTISING
(In Percent)

Statements	Disagree	Tend to Disagree	Tend to Agree	Agree	N/A
1. Advertising has no long-term benefits to my company.	80.0	13.0	4.0	3.0	—
2. During times of economic recession, advertising should be the first budgeted item to be reduced.	53.0	33.0	7.0	7.0	—
3. My company is able to determine the amount of revenue attributable to advertising.	37.0	17.0	17.0	24.0	5.0
4. My company has established a predetermined rate of return for advertising.	47.0	13.0	20.0	14.0	6.0
5. Advertising generates sales only in the period in which we advertise.	60.0	27.0	3.0	10.0	—

Hypothesis 1: Marketing managers in large firms view advertising as an investment, while those in smaller firms are more likely to consider advertising as an expense.

The results of the study indicate that marketing practitioners in large firms view advertising as an investment more often than do marketing managers in smaller firms. Nearly all marketing managers in firms with annual sales less than $500,000 felt that during times of recession advertising should be the first budgeted item reduced. None of the marketing managers in firms with sales over $4 million, however, had similar views. The majority of the respondents felt advertising should not be reduced during recessionary periods. About 40.0 percent of the managers in companies with sales over $4 million felt they were unable to determine the amount of revenue attributable to advertising. Approximately 45.0 percent of the respondents surveyed said their firms had a predetermined rate of return for advertising. Finally, the study showed that nearly one-half (49.0 percent) of the respondents in small firms agreed with the statement that advertising generates sales only in the period in which their firm does advertising.

Hypothesis 2: Marketing managers in firms that have a higher ratio of advertising to sales view advertising as an investment, while those with lower ratios consider advertising an expense.

The results of the survey did not support this hypothesis. However, 17.0 percent of the marketing managers in firms that spend less than 1.0 percent of sales on advertising felt that advertising had no long-term benefits. Further, about half (47.0 percent) of the marketing practitioners in firms that spend less than 2.0 percent of sales on advertising felt that during times of recession advertising should be the first budgeted item reduced. A majority (60.0 percent) of the respondents in firms that spend less than 4.0 percent and about 33.0 percent of the marketing managers in firms that spend 7.0 percent or more on advertising felt they were unable to determine the amount of revenue attributable to advertising.

Hypothesis 3: Marketing managers in corporations are more likely to view advertising as an investment than those managers in sole proprietorships/partnerships.

The findings indicate that 8.0 percent of the respondents in corporations felt that advertising had no long-term benefits to their companies. A majority of the marketing managers in sole proprietorships and partnerships agreed that advertising provided long-term benefits to their companies. Therefore, there is no significant difference in the manner in which the corporation or sole proprietorship/partnership viewed the long-term benefits of advertising. Further, only 8.0 percent of the corporations felt that the advertising budget should be the first budgeted item reduced in times of recessionary periods, while 50.0 percent of the partnerships and sole proprietorships expressed this feeling.

On determining the amount of revenue attributable to advertising, 58.0 percent of the marketing managers in corporations felt they could not, while 33.0 percent of the proprietorships and partnerships gave similar responses. Regarding the establishment of a predetermined rate of return on advertising, approximately 57.0 percent of the corporations and 75.0 percent of the managers in sole proprietorships indicated they did not.

In all of the organizations, the marketing managers indicated some agreement with the statement that advertising generated sales beyond the current period.

Hypothesis 4: Marketing managers in firms that market products are more likely to view advertising as an investment than are firms that market services and/or a combination of products and services.

Marketing managers in firms that market products are more likely to view advertising as an investment as compared to those who market services or both products and services. The results indicate that approximately 60.0 percent of respondents in companies which primarily marketed products felt that advertising had no long-term effects on sales. Approximately 13.0 percent of those companies which marketed services felt that advertising had no long-term benefits to the company, while 20.0 percent of those which marketed both felt that there were no long-term benefits.

The results indicate little difference among companies marketing products or services when asked if advertising should be reduced during periods of recession. Thirteen (13.0) percent of the marketing managers in those companies marketing products, 13.0 percent of those marketing services, and 17.0 percent of those marketing both felt that advertising should be reduced during a recession. Further, 50.0 percent of those marketing products, 50.0 percent of those marketing services, and 67.0 percent of those marketing both could not determine the amount of revenue attributable to advertising. Sixty-nine (69.0) percent of those marketing products, 63.0 percent of those marketing services, and 33.0 percent of those marketing both had no predetermined rate of return for advertising.

Marketing managers held conflicting views relating to whether advertising generated sales only in the period in which the advertising was done. Twenty-five (25.0) percent of the companies marketing products felt that advertising generated sales only in the period in which they advertised, while none of the companies marketing services or both products and services felt this way.

Discussion

The results of the pilot study indicate that marketing practitioners hold conflicting viewpoints on the issue of whether advertising is an expense or investment. Though Hypotheses 2 and 4 were not supported, the results indicate that there are differences in the way marketing managers in firms that have a higher ratio of advertising to sales and in firms that market primarily products as opposed to services view the question of whether advertising is an expense or investment. It was felt that if a firm spends a high percentage of its sales revenue on advertising that it most likely considered it an investment. The data suggest that corporations tend to view advertising as an investment. Most respondents felt that advertising provides long-term benefits; very few felt that the advertising budget should be the first budgeted item reduced during a recession, which suggests it is not viewed as an expense. Although approximately 58.0 percent of the corporations felt they could not determine the amount of revenue attributable to advertising, 42.0 percent felt they could, indicating that a portion of the cash inflows from advertising efforts are measurable.

While there are some minor differences in responses among marketers in companies marketing products, services, or both products and services, there are no major differences in how advertising is viewed by these groups.

Conclusion

Seventeen years after Dean argued for the inclusion of advertising in the capital budget, marketing practitioners are still divided on the issue. This study found that marketing managers in large firms and/or corporations were more likely to view advertising as an investment than were those managers in smaller firms and/or sole proprietorships/partnerships. The hypothesis that marketing managers in firms that had high ratios of advertising to sales and in firms that marketed products would view advertising as an investment, while those managers in firms with low ratios of advertising to sales and service marketers would view advertising as an expense were not supported by the research findings. However, there appears to be greater support from marketing practitioners in all types and sizes of companies for the inclusion of advertising in the capital budget.

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THE JANUARY INDICATOR: A NONRANDOM BUT UNPROFITABLE WALK

*Joseph S. Martinich**

Introduction

The "January Indicator" is one of the most widely espoused stock market trading rules in popular financial literature (e.g., see [6], [7], [9]). The rule is generally stated as: the stock market's directional change in January signals the market's direction for the remainder of the year (or some other subsequent period).[1] If such a rule produces a profitable investment strategy, it would be evidence against the "random walk" and "efficient market" theories.

In spite of its wide popularity and the important implications if it is true, the only empirical studies of the January Indicator have been simple computations of its "success" proportion (see [1] and [4]) and a crude rate of return analysis [4]. This article rigorously tests the January Indicator using three procedures: (1) a statistical test of independence between stock price changes during January and subsequent periods, (2) a statistical test of mean percentage stock price changes for periods following January stock price increases versus January price decreases, and (3) a comparison of the annual rate of return using the January Indicator as an investment rule versus a "buy-and-hold" strategy. Both the Dow Jones Industrial Average (DJIA) and the Standard and Poor's Composite Index (SPCI) are used as stock market surrogates. In addition to January, this article also evaluates the other eleven months in a similar way to determine whether they are positive or negative indicators of future stock market movements.

The results vary depending upon the stock price index used. For the DJIA the tests all fail to confirm January market performance as an "indicator" of future price movements. For the broader SPCI the statistical tests indicate that the stock market's performance in January may, in fact, be a predictor of market performance in subsequent periods. However, trading rules based upon this predictive ability underperform a buy-and-hold strategy over the long term.

Statistical Tests

Test of Independence

A standard chi-square test of independence was used to test the following hypothesis: *The directional change in stock prices during January is independent of the directional change in subsequent periods.* Two x two contingency tables were constructed indicating the directional change in stock prices during January versus the directional change during the subsequent eleven-month and twelve-month periods (referred to below as the "eleven-month" indicator and "twelve-month" indicator). The period from December 31, 1927 through January 31, 1981 (i.e., 53 observations for both the eleven- and twelve-month indicators) was chosen so as to give a large enough number of observations (at least five) in each cell of the contingency tables. Tables 1 and 2 contain the contingency tables for the DJIA and SPCI, respectively.

The chi-square statistic, with the Yates' continuity correction,[2] was then computed for each contingency table to determine whether the directional change in stock prices during January was independent of the directional changes during subsequent periods. For the DJIA the chi-square statistic was 1.538 for the "eleven-month" indicator and 0.059 for the "twelve-month" indicator. In neither case can the independence hypothesis be rejected even at the 0.10 level (which requires a chi-square value greater than 2.706). However, for the SPCI the chi-square statistic

Table 1
CONTINGENCY TABLES FOR DJIA

January Change	Next 11-Month Change: Up	Next 11-Month Change: Down	
Up	25 (22.45)	10 (12.55)	35
Down	9 (11.55)	9 (6.45)	18
	34	19	

A. January vs. Next 11 Months

January Change	Next 12-Month Change: Up	Next 12-Month Change: Down	
Up	24 (23.11)	11 (11.89)	35
Down	11 (11.89)	7 (6.11)	18
	35	18	

B. January vs. Next 12 Months

(Theoretical frequencies are given in parentheses in each cell.)

**The author is Assistant Professor of Management Science, University of Missouri-St. Louis, St. Louis, Missouri. The author would like to acknowledge the helpful comments of Peter Bernstein, Stanley Miedich, and Vicki Sauter.*

MID-SOUTH ECONOMY

BUREAU OF BUSINESS & ECONOMIC RESEARCH THE FOGELMAN COLLEGE OF BUSINESS AND ECONOMICS MEMPHIS STATE UNIVERSITY

STATISTICAL SUPPLEMENT

THE MID-SOUTH ECONOMY

Economic data released thus far for third quarter 1984 contain mixed signals regarding the pace of economic activity. Although unemployment increased slightly in July, for the first time since November 1982, and retail sales and housing starts registered moderate declines, most other broad economic indicators continued to advance briskly. Inflation remained subdued, with the latest reading of the "misery" index—the combination of inflation and unemployment—half what it was four years ago and the lowest since 1973. Non-farm productivity grew at a surprising annual rate of 4.7 percent for the second quarter of 1984, and the utilization rate of the nation's factories, mines, and utilities rose to its highest level in four years. Corporate profits remained robust, with gross private domestic investment 40.0 percent above the levels of a year ago. However, with the pace of economic activity remaining above forecasters' expectations, most observers continue to forecast a "soft-landing" for the economy in the near future. Moreover, this moderation in economic activity is needed in order to make room for lower interest rates and the possibility for keeping inflation in check. Most observers point to the fact that the Composite Index of Leading Indicators—a gauge of future activity—fell in June and July, and the Commerce Department's "flash" estimate of the nation's real Gross National Product indicated an increase of only 3.6 percent for third quarter 1984—less than half the 8.5 percent growth rate registered during the first half of 1984. According to the most recent capital spending survey by the Commerce Department, if business spending plans materialize, 1984 will post the largest annual rise in capital spending in two decades.

For the Mid-South, inflation-adjusted non-farm personal income grew 4.6 percent from first quarter 1983 to first quarter 1984, with total employment up 5.8 percent above the levels of a year ago. Year-to-date sales tax collections across the Mid-South were 23.7 percent higher than during the comparable 1983 period. Finally, the Tax Foundation's latest rankings of states by per capita federal tax burden for 1984 ranked the Mid-South states as follows: Alabama (48th), Arkansas (50th), Louisiana (30th), Mississippi (51st), and Tennessee (40th).

Labor

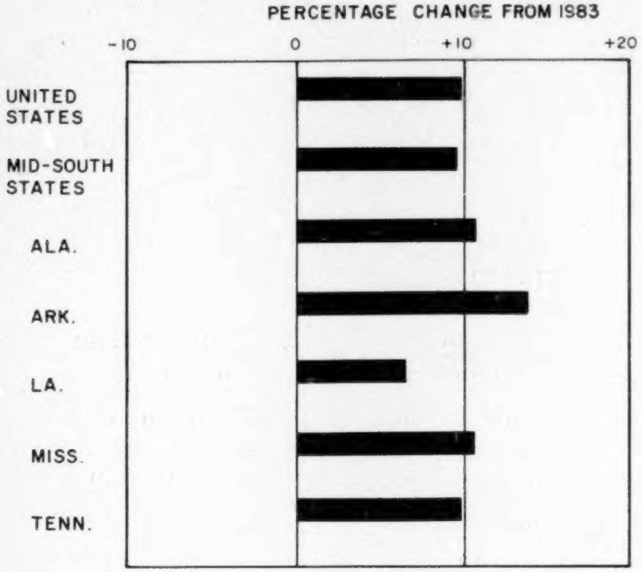
Since the recession low in November 1982, the demand for labor has been buoyant and employment has expanded rapidly, with relatively slow growth in the nation's civilian labor force. The nation's unemployment rate has dropped sharply from 10.6 percent to the current rate of 7.5 percent. This expansionary phase has registered the largest drop in unemployment in the last 25 years. However, while Mid-South states have made progress in cutting their unemployment rolls, the unadjusted aggregate unemployment rate for July 1984 remained in double digits at 10.0 percent, compared to an 11.8 percent rate last July. For the Mid-South, manufacturing employment added 49,700 workers since last July, up 3.6 percent. Solid gains were registered in the non-electrical machinery sector, up 10,000 workers, with primary metals/basic steel adding 4,800. Non-agricultural employment for July 1984 totaled 6,309,700, increasing 3.8 percent. Retail trade registered the best gain, adding 27,300 workers over last July.

Construction

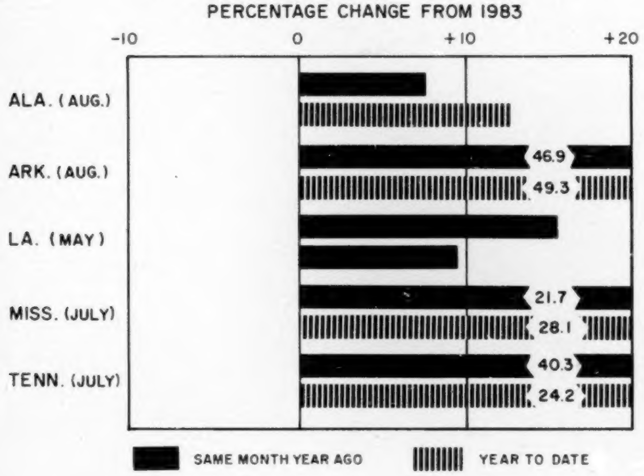
The total dollar value of building permits in the Mid-South (excluding Arkansas) for the twelve months ending June 1984 totaled $6.1 billion, an increase of 33.9 percent from the comparable 1983 period, outpacing the national increase of 31.1 percent. Mid-South construction employment totaled 334,100 in July 1984, up 5.6 percent from last July. For the nation as a whole, new private housing starts for July 1984 registered an annual rate of 1.76 million units, down 1.8 percent from a year ago. Tennessee showed the best performance in residential activity, with the value of building permits increasing 66.4 percent and dwelling units up 83.6 percent. On the non-residential side, Alabama was the best performer with an increase of 95.4 percent, primarily concentrated in industrial buildings and schools.

As a result of the weak second quarter performance in housing activity, the National Association of Home

PERSONAL INCOME - I QTR. 1984

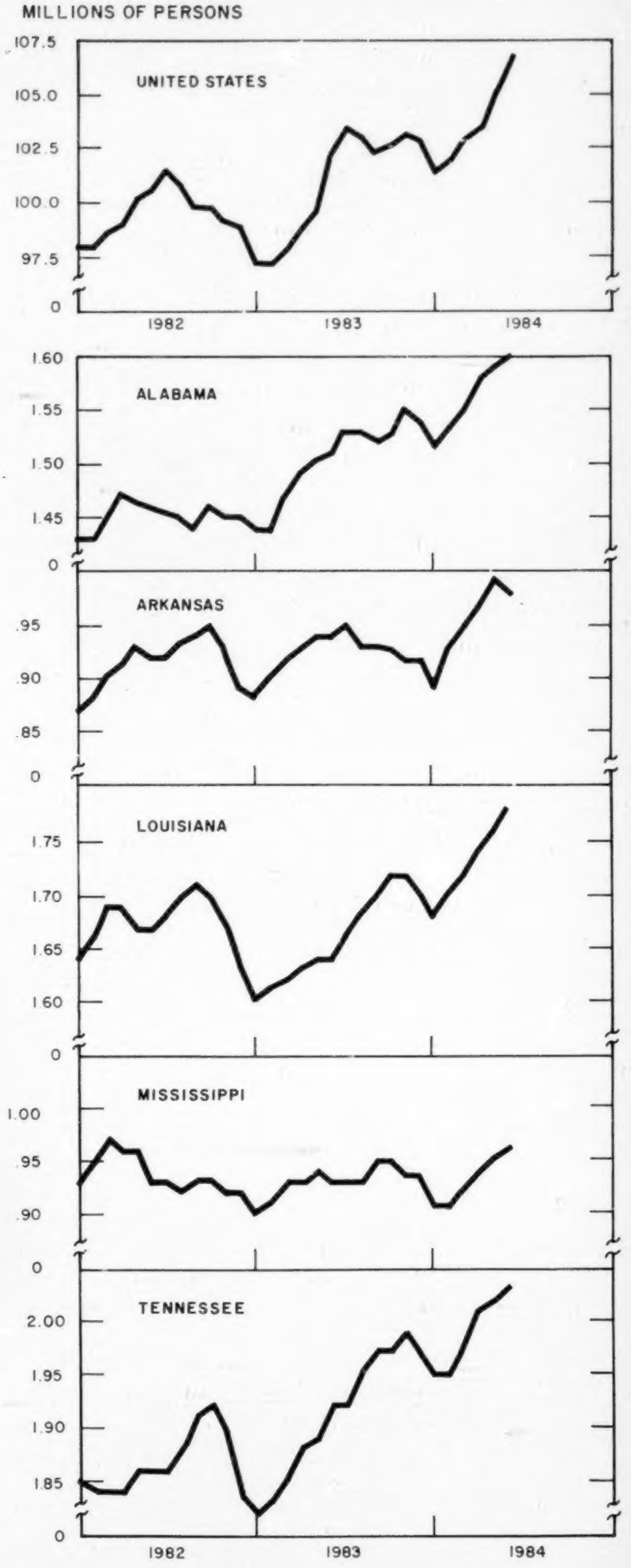


SALES TAX COLLECTIONS 1984



SOURCES: BUREAU OF ECONOMIC ANALYSIS
STATE DEPARTMENTS OF EMPLOYMENT
SECURITY AND REVENUE.

TOTAL EMPLOYMENT



Builders' Chief Economist maintains that overall construction activity should remain sluggish in the coming months due to interest rates which are still too high. However, some relief is forthcoming as the Veterans Administration lowered its mortgage rate from 14.0 to 13.5 percent in early August, and the Federal National Mortgage Association—Fannie Mae—is set to unveil a new type of mortgage called the "fixed payment, adjustable rate" which is keyed to the one-year Treasury security index. Currently, the rate on this new mortgage is 2.0 to 2.5 points below the 30-year conventional rate.

Finance

The demand for short-term business credit (business loans plus non-financial commercial paper) over the first half of 1984 has been unusually strong. Most of the increase in short-term business credit has come in the form of bank loans which increased 14.4 percent over the comparable 1983 period. Total deposits at the nation's commercial banks have improved in recent months, with June 1984 deposits 9.3 percent higher that those of last June. Three-month Treasury bills reached double digits in July 1984 averaging 10.13 percent, with corporate AAA bonds averaging 13.44 percent, 129 basis points above last July.

Year-to-date mortgage lending by Mid-South savings and loan institutions totaled $3.33 billion, an increase of 26.0 percent over the comparable 1983 period. Arkansas was the only Mid-South state to register a decline from the levels of a year ago. Net savings flows were mixed for Mid-South savings and loans, with year-to-date net savings flow 33.6 percent lower than in the comparable 1983 period.

LABOR 1984	United States (June)	Mid-South States				
		Alabama (July)	Arkansas (July)	Louisiana (July)	Mississippi (July)	Tennessee (July)
Civilian Labor Force	115,393,000	1,798,600	1,068,900	1,953,200	1,079,200	2,229,200
Percent Change Year Ago	+ 1.8	+ 0.1	+ 3.3	+ 1.0	- 0.5	+ 0.8
Unemployed	8,582,000	211,400	98,100	181,900	117,300	202,100
Percent Change Year Ago	-25.8	-16.6	- 3.7	-22.2	-18.6	-22.8
Unemployment Rate						
1984	7.4	11.8	9.2	9.3	10.9	9.1
1983	10.2	14.1	9.8	12.1	13.3	11.8
Non-Agricultural Wage & Salary Employees	94,019,000*	1,351,400	766,200	1,573,400	794,800	1,823,900
Percent Change Year Ago	+ 4.5	+ 1.5	+ 4.0	+ 0.5	+ 0.8	+ 6.2
Manufacturing Employment	19,630,000*	346,900	210,900	181,900	210,000	496,400
Percent Change Year Ago	+ 6.7	+ 2.8	+ 3.9	+ 1.1	+ 2.1	+ 5.9
Non-Manufacturing Employment	74,389,000*	1,004,500	555,300	1,391,500	584,800	1,327,500
Percent Change Year Ago	+ 4.0	+ 1.0	+ 4.0	+ 0.4	+ 0.4	+ 6.3
Average Weekly Earnings of Production Workers in Manufacturing	$373.42	$328.44	$297.82	$414.10	$274.11	$313.91
Percent Change Year Ago	+ 5.4	+ 6.5	+ 3.2	+ 3.6	+ 2.9	+ 4.3
Average Weekly Hours of Production Workers in Manufacturing	40.9	40.8	40.3	41.0	39.9	40.4
Percent Change Year Ago	+ 1.5	+ 0.2	- 0.2	+ 2.0	+ 0.3	+ 0.3
Average Hourly Earnings of Production Workers in Manufacturing	$ 9.13	$ 8.05	$ 7.39	$ 10.10	$ 6.87	$ 7.77
Percent Change Year Ago	+ 3.9	+ 6.2	+ 3.5	+ 1.6	+ 2.7	+ 4.0

*Seasonally adjusted.

Source: Departments of Employment Security and Survey of Current Business.

CONSTRUCTION[1] JUNE 1984	United States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Total Building Percent Change Year Ago	+31.1	+72.1	N.A.	+14.5	+55.8	+37.0
Residential Building Percent Change Year Ago	+36.7	+46.0	N.A.	+28.9	+56.5	+66.4
Non-Residential Building[2] Percent Change Year Ago	+24.5	+95.4	N.A.	+ 2.8	+55.8	+18.4
Total Dwelling Unit Percent Change Year Ago	+27.5	+37.9	N.A.	+19.1	+53.4	+83.6

[1] Twelve-month cumulative rate.

[2] Non-residential data exclude the cost of construction for publicly-owned buildings.

Source: The Federal Reserve Bank of Atlanta from data supplied by the Bureau of Census.

FINANCE JUNE 1984	United States	Mid-South States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Member Banks as of June 6, 1984 Percent Change from Comparable Date in 1983							
Total Deposits	+ 9.3	+ 6.8	+ 9.4	N.A.	+4.8	+ 6.4	+ 7.6
Demand Deposits	+ 7.2	+ 4.4	+ 7.5	N.A.	+0.8	+ 3.5	+ 7.3
Time Deposits	+12.8	+10.2	+12.1	N.A.	+5.3	+11.2	+14.2
Savings Deposits	+ 6.2	+ 1.4	+ 6.1	N.A.	+7.2	+ 0.7	- 6.8

Source: The Federal Reserve Bank of St. Louis and the Federal Reserve Bank of Atlanta.

SAVINGS AND LOAN ACTIVITY JUNE 1984	Alabama	Arkansas	Louisiana	Mississippi	Tennessee[1]
Mortgage Loans Made (millions)	$107.8	$113.4	$236.2	$45.0	$111.6
Percent Change Year Ago	+53.6	-28.7	+30.6	+36.8	+51.0
Percent Change Year-to-Date	+45.8	- 7.0	+44.6	+55.3	+41.0
Net Savings Flow (millions)[2]	$ 76.1	$ 88.6	$197.7	$37.1	$ 60.3
Percent Change Year Ago	+ 8.1	+35.5	+23.1	+42.1	-13.1
Percent Change Year-to-Date	-50.4	-33.1	-21.3	- 5.0	-54.9

[1] Figures are for total loans made.

[2] Net savings flow equals new savings received plus dividends credited minus savings withdrawn.

Source:, Federal Home Loan Banks of Little Rock, Cincinnati, and Atlanta.

TENNESSEE ECONOMY

The Tennessee economy performed well during the first half of 1984. From second quarter 1983 to second quarter 1984, total non-agricultural employment in Tennessee grew 5.4 percent, outperforming the national increase of 4.6 percent. Over the same period, retail sales also outperformed the nation, up 17.9 and 11.5 percent, respectively. Strong retail sales and the recent 1¢ sales tax hike helped boost year-to-date sales tax collections 24.2 percent higher than in the comparable 1983 period. Non-manufacturing employment grew 5.1 percent versus the U.S. rate of 4.0 percent, with manufacturing employment climbing 6.5 percent compared to the nation's strong gain of 7.0 percent. Employment in the durable goods sector rose 23,400, while non-durable goods added 4,400 workers from last July. In a somewhat related development, an April 1984 survey by the Federal Reserve Bank of Atlanta showed Tennessee has the largest number of industrial robots, 468, out of the 1,253 in operation in the eight Southeastern states. The second largest number of robots in operation, 208, was recorded in North Carolina. Tennessee has a commanding lead in robots used in the furniture/fixtures, stone/clay/glass, and service sectors. Tennessee has 44.0 percent of the eight-state total operating in the primary and fabricated metals sector and 59.0 percent in the instruments sector. Some 67.0 percent of all robots in Tennessee are concentrated in the transportation equipment sector.

For the twelve months ending June 1984, the dollar value of building permits increased 37.0 percent from the comparable 1983 period, outperforming the national increase of 31.1 percent. On the residential side, multi-family units were the best performer, up 168.6 percent over 1983 to 23,100 units. On the non-residential side, industrial buildings increased 37.0 percent with stores climbing 21.4 percent.

Thus far, the 1984 growing season stands in stark contrast to 1983's drought-ridden crops. This has raised harvest expectations for most crops, with corn and tobacco expected to produce record yields. However, the price/cost squeeze is still evident, with the August 1984 index of prices Tennessee farmers receive for all farm products declining 2.0 index points from last August, and the prices farmers pay for goods and services, as measured on the national level, increasing 4.0 index points to stand at 165.0 of its 1977=100.0 base.

Table 2
CONTINGENCY TABLES FOR SPCI

Next 11-Month Change

January Change	Up	Down	
Up	26 (22.45)	8 (11.55)	34
Down	9 (12.55)	10 (6.45)	19
	35	18	

A. January vs. Next 11 Months

Next 12-Month Change

January Change	Up	Down	
Up	26 (21.81)	8 (12.19)	34
Down	8 (12.19)	11 (6.89)	19
	34	19	

B. January vs. Next 12 Months

(Theoretical frequencies are given in parentheses in each cell.)

for the "eleven-month" indicator was 3.402, which implies rejection of the independence hypothesis at the 0.10 level, while for the "twelve-month" indicator the chi-square statistic of 4.834 is significant at the 0.05 level.

One explanation for the mixed results is the span of time considered. It is quite possible that the extended time period which included two significant disruptions in the market (the Depression and World War II) distorted the January Indicator. Alternatively, it is possible that the mixed results were due to the relative recency of the January Indicator. In either case, and also to be consistent with most reports which restrict attention to the post-World War II period, it is desirable to repeat these tests for a shorter period (e.g., 1946-1981). Unfortunately, the most recent period which has a minimum of five observations in each cell for all four cases (Tables 1 and 2) is December 31, 1933-January 31, 1981. Repeating the analysis for this period (47 observations), the chi-square statistics using the DJIA were 2.492 and 0.242 for the eleven- and twelve-month indicators, respectively; again, neither is significant at the 0.10 level. Using the SPCI, the values were 5.216 for the eleven-month indicator (significant at the 0.025 level) and 7.025 for the twelve-month indicator (significant at the 0.01 level). Thus, the case against independence is somewhat strengthened for the SPCI, but the January Indicator can still be rejected for the DJIA.

Test of Means

The preceding results indicate that, at least for the SPCI, the *direction* of price changes during January and the subsequent eleven- and twelve-month periods may not be independent. A more informative test is to determine whether the mean percentage price change following an increase during January is statistically different than the mean percentage price change following a decrease during January.[3] The following hypothesis was proposed: *The mean percentage price change for the eleven-month (twelve-month) period following January price increases is greater than the mean percentage price change for similar periods following January price decreases.*

Table 3 presents the mean price changes for the twelve-month periods following January stock price increases and decreases for selected time intervals. (The results for the eleven-month periods are qualitatively the same and thus are omitted.) Tests of means using the t-statistic were performed (see [5, pp. 299-303]); significance levels are indicated by asterisks in Table 3. For the DJIA there is no statistically significant difference between those periods following an increase in price during January and those following a decrease during January. For the SPCI there is no statistically significant difference for the pre-World War II period, 1928-1945, or the entire period, 1928-1980. (In fact, notice that on average during 1928-1945 the market performed better following a January decrease than following an increase for both the DJIA and the SPCI.) However, during the post-World War II period, 1946-1980, the means are statistically different at the .01 level of significance; for the post-World War II subperiods, 1946-1972 and 1973-1980, the means are statistically different at the .05 level.

Table 3
MEAN PERCENTAGE PRICE CHANGES FOR
TWELVE MONTHS FOLLOWING JANUARY

	DJIA		SPCI	
Time Period	Mean Percent Change Following Jan. Decrease	Mean Percent Change Following Jan. Increase	Mean Percent Change Following Jan. Decrease	Mean Percent Change Following Jan. Increase
1928-1980	4.56 (21.19)	5.57 (23.89)	1.86 (20.76)	8.59 (22.35)
1928-1945	14.73 (32.68)	1.11 (35.66)	10.15 (32.86)	2.75 (33.15)
1946-1980	0.28 (10.59)	7.80 (15.65)	-1.96•• (12.09)	11.74•• (13.30)
1946-1972	3.48 (7.21)	8.20 (14.76)	1.34• (9.96)	11.02• (13.75)
1973-1980	-8.23 (15.11)	5.65 (23.28)	-9.40• (14.62)	14.92• (12.28)

Values in parentheses are standard deviations.

• $p < .05$.

•• $p < .01$.

Since World War II, the SPCI increased an average of almost 12% during the twelve months following a January price increase, while on average it decreased almost 2% during the twelve months following a January price decrease. However, most of this latter effect is attributable to the 1973-1980 period. Removing this period from consideration, during the 1946-1972 period there is an average *increase* of over 1% in the twelve months following a January decrease. Thus, in spite of the fact that there is a statistically significant difference in market performance following January price decreases versus increases, it would *not* have been advantageous to "leave" the market following January price decreases. When transaction costs and loss of dividends (net of the interest that could be earned on cash) are considered, leaving the market would be even less desirable. These factors are brought out explicitly in the following section.

Rate of Return Analysis

For the investor the proof of any investment rule is in its financial performance relative to other rules, such as a "buy-and-hold" strategy. To evaluate these rules the rate of return can be computed for various investment strategies based upon the "January Indicator" and compared with the rate of return for a buy-and-hold strategy. In this section four "January Indicator" rules are evaluated.

(1) It was assumed that the investor began with $1,000 on January 31, 1928. Each year, if the DJIA (SPCI) increased during January, then the investor used all money on hand to buy the DJIA (SPCI) at its closing price for January (problems with assuming that trades could be executed at the closing price were ignored). The investor held the portfolio for eleven months and then sold at the December closing price. Dividends[4] were assumed to be received at the end of the year.[5] If the DJIA (SPCI) decreased in January, then the investor instead put all funds into twelve-month Treasury Bills.[6] A 0.5% transaction cost was charged whenever stock was bought or sold; no charge was made to obtain T-Bills. The ending portfolio value on January 31, 1981 was then used to compute an equivalent annual rate of return assuming annual compounding.

(2) Same as rule (1) except that whenever stock was purchased it was assumed to be held for twelve months rather than eleven. This rule reduced transaction costs (by avoiding selling every December if repurchase was to occur in the following January); furthermore, it kept the investor's funds in the stock market during January which on average has an upward bias.

(3) Same as (1) except that in addition to buying T-Bills whenever the market was down in January, it was assumed that the investor also sold short the DJIA (SPCI) in an amount equal to his portfolio value. Following standard practice, the investor was required to pay the dividends on the shorted stock and did not receive interest income on the proceeds of the short sale. The 0.5% transaction cost was again charged on all stock transactions.

(4) Same as (3) except that all stock was either bought or sold short for twelve-month periods rather than eleven months so as to reduce transaction costs.

Rule (2) outperformed the other three rules for most of the time periods considered and so only results for this rule are presented. (Short-selling was not a good long-term strategy due to the historical upward bias of the stock market and the additional expenses involved.) The rate of return using a "buy-and-hold" strategy was also computed using the DJIA and the SPCI for the period January 31, 1928-January 31, 1981 (dividends were assumed to be received at the end of the year and reinvested without cost). The first line of Table 4 contains the rates of return during 1928-1981 for Rule (2) and the buy-and-hold strategy for both the DJIA and the SPCI.

Table 4
ANNUAL RATES OF RETURN FOR JANUARY INDICATOR AND BUY-AND-HOLD STRATEGIES

	DJIA		SPCI	
Time Period	Rule 2	Buy-and-Hold	Rule 2	Buy-and-Hold
1928-1981	5.9	7.7	7.9	8.4
1928-1946	0.7	5.6	1.9	5.6
1946-1981	8.7	8.9	11.1	9.9
1946-1973	8.9	10.3	10.7	11.1
1973-1981	8.1	4.1	12.5	5.7

For the 53-year period from 1928-1981, the buy-and-hold strategy outperformed the January Indicator rules for both the DJIA and the SPCI. However, as mentioned previously, it may be argued that the January Indicator is a more recent phenomenon and/or may have been distorted during the Great Depression and World War II. To evaluate this factor the rates of return were recomputed for the pre- and post-World War II periods of 1928-1946 and 1946-1981. For the DJIA the buy-and-hold strategy outperformed the January Indicator during both intervals. For the SPCI the buy-and-hold strategy was superior during the 1928-1946 period but was outperformed by the January Indicator during 1946-1981. However, two factors should be noted. First, the 0.5% transaction cost is very conservative, which favors the January Indicator rules. If a transaction cost of 2-3% were used, which is more realistic for small traders (especially before fixed-commission rates were eliminated), this advantage would be almost entirely eliminated as trades occur approximately once every 2 1/2 years with Rule (2). Second, and more importantly, the entire post-World War II "advantage" of the January Indicator can be attributed to the 1973-1981 period; specifically, the correct "prediction" of the 1973-1974 market crash. Table 4 shows that during the period from 1946-1973 the buy-and-hold strategy outperformed the January Indicator. It was only the far superior performance during 1973-1981 that gave the January Indicator an overall post-World War II advantage.

Other Monthly Indicators

The other eleven months were tested in a similar fashion to determine whether they were positive or negative indicators (i.e., price movements in the indicator month signal moves in the opposite direction during subsequent months) of future market performance. For both the DJIA and the SPCI the chi-square statistic was not significant at even the 0.10 level for any of the other eleven months during the 1928-1980 period. Similarly for 1928-1980, the tests of means for the other eleven months indicated no statistically significant differences in mean performance following increases versus decreases during the indicator month.

As with the January Indicator, trading Rule (2) (or its opposite, i.e., buy if indicator month is "down," sell if indicator month is "up") outperformed Rules (1), (3), and (4). Considering the results for the tests of independence and means, it is not surprising that the buy-and-hold strategy outperformed the indicator trading rules for every month during the 1928-1981 period for both the DJIA and SPCI. The same result held for the 1946-1981 period as well. However, during the 1973-1981 period *all* eleven months had indicator rules (eight positive rules, three negative rules) which outperformed the buy-and-hold strategy for either the DJIA or the SPCI or both! The key feature in each case was that the indicator which kept the investor out of the market during the 1973-1974 period produced the best rate of return relative to buy-and-hold. For most months the indicator rules did almost as well as the January Indicator relative to buy-and-hold over comparable periods, and one month actually did better than January. Using September as a negative indicator would have produced a 16.0% return versus a 5.4% return for a buy-and-hold strategy using the SPCI during the September 30, 1973-September 30, 1981 period.

Conclusions

The analyses performed here have tested the theoretical validity and the investment value of the January (and other monthly) Indicator(s). The results from both the statistical and rate of return analyses clearly fail to support the January Indicator theory using the DJIA. However, some of the statistical results for the SPCI indicate that there may be dependence between January stock price movements and those in subsequent periods, but this "nonrandomness" cannot be exploited. Specifically, ignoring the years 1973-1981, the rate of return from a buy-and-hold strategy exceeds that of the best January Indicator rule over the long term. This can be explained by the fact that even though January stock price decreases have a relatively good record for predicting subsequent decreases in stock prices, the opportunity costs when wrong are greater than the net benefits accrued when correct.

Furthermore, the fact that the January Indicator outperformed the buy-and-hold strategy during 1973-1981 is not surprising since during any short interval a strategy which "avoids" a large market drop will compare favorably to a buy-and-hold strategy. This was demonstrated by the results for the other eleven months. Over the long term none of the monthly indicators outperformed "buy-and-hold," but for 1973-1981 indicator rules could be developed for *every* month which outperformed "buy-and-hold" by getting the investor out of the market during 1973-1974.

Although some of the results for the SPCI conflict with the "random walk hypothesis," the results clearly are consistent with the "efficient market hypothesis." Thus, the January Indicator appears to be more fallacy than fact. These results suggest that other trading rules in the stock market folklore (e.g., year-end rallies, election year rallies, the hemline theory) should be evaluated rigorously. They, too, may lead the investor on a nonrandom, but still unprofitable walk.

FOOTNOTES

[1] Sometimes the theory is stated as: the market's performance in January is a signal of the market's performance for the entire year. Since the performance in January biases the result for the entire year, this is not a useful investment definition. For example, suppose the Dow Jones average is up 50 points in January and down 20 points during the next eleven months, so the market is up for the year. If one invested on February 1 (after waiting for January's results), the rule would "work" but the investor would lose money.

[2] The chi-square statistic, with Yates' continuity correction is given by

$$\chi^2 = \Sigma \frac{(|f_0 - f_t| - ½)^2}{f_t}$$

where f_t is the theoretical frequency for the cell and f_0 is the observed frequency; summation is taken over all four cells [5, pp. 328-335].

[3] An alternative approach is to use a test of correlation between percentage price change in January and percentage price change in subsequent periods. Correlation tests *were* performed, and the results were qualitatively the same as those obtained using the test of means. However, the correlation test is not easily convertible into trading rules. The only rule investigated was to use price changes in January which were above or below the historic mean change as a buy or sell signal rather than above or below zero; this rule underperformed the rules reported in the following section.

[4] Dividends were computed by converting the average yield during January given in [2] and [8] to dollar values. DJIA yields were not readily available for 1928-1961, so SPCI yields were used for the DJIA during these years.

[5] Assuming dividends are received only at the end of the year, rather than monthly, is conservative in the sense that it penalizes the buy-and-hold strategy slightly.

[6] The discount (interest) on T-Bills was assumed to be received at the time of investment. Three-, six-, and nine-month T-Bills were used during 1928-1949 when one-year T-Bills were not available. Data were obtained from [3].

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A SIMPLIFIED APPROACH TO THE ALTERNATIVE MINIMUM TAX

*Wm. Brent Carper, Rodger A. Bolling, and Phillip P. Storrer**

Introduction

In 1966, 154 individuals with adjusted gross incomes in excess of $200,000 succeeded in eliminating any income tax liability by extensive use of tax allowances authorized by the Internal Revenue Code—the most popular combination being the exclusion (under the then existing law) of one-half of long-term capital gains and the offset of itemized deductions against the taxpayer's remaining income.[1] Judged from the Treasury's macroeconomic heights, the revenue loss from these high-income, low-tax individuals was not overwhelming, but Congress thought that their immunity threatened taxpayers' morale.[2] In the words of the Senate Finance Committee:

> The fact that present law permits a small minority of high-income individuals to escape tax on a large proportion of their income has seriously undermined the belief of taxpayers that others are paying their fair share of the tax burden. It is essential that tax reform be obtainable not only as a matter of justice but also as a matter of taxpayer morale. Our individual and corporate income taxes, which are the mainstays of our tax system, depend upon self-assessment and the cooperation of taxpayers. The loss of confidence on their part in the fairness of the tax system could result in a breakdown of taxpayer morale and make it far more difficult to collect the necessary revenues.[3]

Congress responded to this situation with legislation that, as amended from time to time, now consists of the so-called add-on tax on tax preferences of Internal Revenue Code Section 56, which is applicable only to corporations and must be paid in addition to the corporation regular income tax, and the alternative minimum tax of Code Section 55, imposed on other individuals, trusts, and estates, which is payable only if it exceeds the amount of the taxpayer's regularly computed tax liability.[4]

The new alternative minimum tax enacted as a part of TEFRA appears to be the first legislative attempt at a form of flat-rate tax. The tax is 20% of a broadened income base with fewer deductions, fewer preferences, and virtually no credits. This new tax, which is effective for taxable years beginning after December 31, 1982, will undoubtedly catch many tax planners and preparers flat-footed. Planning for it is important to avoid surprises.

The following material offers some practical planning points to consider and an alternative minimum tax computational worksheet for determining the liability for the new tax.

Planning Considerations

1. The election to amortize certain tax preferences such as mining and exploration and development costs, circulation expenditures, research and experimental expenditures, and intangible drilling costs removes these items as tax preferences (JCT Explanation, p. 22). This election can be made for the portion of costs that the taxpayer selects.

   The effect of this election as it affects intangible drilling costs is that it is treated as if such amounts were used to acquire five-year recovery property. The ACRS deduction would, therefore, be allowed in the first year in which the intangible drilling costs are paid or incurred. Investment tax credit is also available in the year the property is "placed in service." The Section 48(q) basis adjustment applies, however. The 2% reduced credit election also applies. Sections 1245 and 47(a) recapture of recovery and investment tax credit will also apply in the year of disposition. The election to capitalize intangible drilling costs incurred outside the U.S. is not available. The law will undoubtedly be changed to clarify this issue. Each partner and "S" corporation shareholder can elect the portion of the expense to be capitalized.

2. Capital gains should be planned for optimum tax savings.

   Example: Cal Amity is married and has two dependent children. During 1983, he had the following income and expenses:

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Adjusted gross income (excluding capital gains and losses)	$ 20,000
Total itemized deductions	6,200
Zero bracket amount	(3,400)
Excess itemized deductions	$ 2,800
"Alternative tax itemized deductions"	4,000
Long-term capital gain from sale of land	430,000
60% § 1202 tax benefit	(258,000)
Balance subject to tax	$172,000
Investment tax and energy credits	$ 15,000

Analysis of effect of alternative minimum tax:

	Regular Tax	Alternative Minimum Tax
AGI excluding:		
Capital gains and losses	$ 20,000	$ 20,000
Long-term capital gain	172,000	172,000
60% tax benefit tax preference	—	258,000
Excess itemized deductions	(2,800)	—
Alternative tax itemized deductions	—	(4,000)
Exemptions	(4,000)	(40,000)
Balance subject to tax	$185,200	$406,000
Tax liability	76,602	81,200
Investment & energy credits	(15,000)	—
Net tax	$ 61,602	$ 81,200

Assume that Cal owns 5,200 shares of Continental Airlines which he purchased on February 3, 1981, for $40 per share. He can sell it to a friend for $1 per share. Selling this stock during 1983 for $1 per share would affect his 1983 tax liability as follows:

	Regular Tax		Alternative Minimum Tax	
AGI excluding capital gains and losses		$ 20,000		$ 20,000
Long-term capital gain	$430,000		$430,000	
Long-term capital loss	(202,800)		(202,800)	
Net long-term capital gain *minus* net long-term capital loss	227,200		227,200	
60% § 1202 deduction	(136,320)		(136,320)	
Capital gain net of the 60% § 1202 deduction		90,880		90,880
AGI including capital gains and losses		110,880		110,880
Excess itemized deductions		(2,800)		—
Alternative tax itemized deductions		—		(4,000)
Exemptions		(4,000)		(40,000)
Balance		$104,080		
Capital gain preference 60% deduction		—		136,320
Balance subject to tax		$104,080		$203,200
Tax liability		36,148		40,640
Investment tax and energy credits		15,000		—
Net tax payable		$ 21,148		$ 40,640

Several observations:

(a) Cal will pay the larger $40,640 figure and will be entitled to carry the otherwise lost credit of $15,000 back 3 years and forward 15 years. A carryback will probably be advisable since the years to which it will be carried are pre-alternative minimum tax years.

(b) The alternative minimum tax will be larger than the regular tax unless the capital loss is large enough to reduce the alternative minimum taxable income below the $40,000 exemption. This is due to the flat 20% alternative rate which is larger than the regular tax rates that would apply to lower amounts of regular tax.

(c) Long-term capital losses work just as well as short-term capital losses to reduce alternative minimum taxable income.

(d) Cal can wait for 31 days and buy Continental Airlines stock again without violating the wash sale rules. But he must wait as least that long (see § 1091).

3. Do not repay taxes if the taxpayer is subject to the alternative minimum tax since taxes are not deductible in computing alternative minimum taxable income.

4. Tax exempt munibond interest is not subject to alternative minimum tax. Therefore, those who are subject to the alternative minimum tax may wish to consider tax exempts.

5. Tax shelters are the focus of the new alternative minimum tax. But some still have life. Examples of shelters which do not produce tax preferences include:

(a) Timber [Section 194, Section 48(a)(1)(i)].

(b) Intangible drilling costs with the five-year ACRS election discussed above.

(c) Shelters which produce carryback credits to pre-alternative minimum tax years. Credits carried back to 1980, 1981, or 1982 can be used to offset any income tax liability for those years.

(d) Rehabilitation expenditures and certified historical structures.

6. A taxpayer subject to the alternative minimum tax because of an employee incentive stock option should seriously consider selling the stock which created the tax preference. Selling the stock will remove it as a tax preference for alternative minimum purposes. The gain created by the sale will be subject to regular tax as a short-term capital gain, but will result in the payment of no more tax than would otherwise be payable as the alternative minimum tax. The tax savings results not from a reduction of current tax, but from the fact that the taxpayer avoids the second tax that would otherwise result from the sale of stock in a later year. The taxpayer should sell stock until the regular tax liability rises to equal the alternative minimum tax liability. This is advantageous in that not only will there be no second tax in a later year, but the regular tax is more conducive to sheltering. The following example demonstrates this technique.

Example: Assume that Bill Ding, who is married and has two children, exercised an employee incentive stock option during 1983 which created an item of tax preference equal to $300,000. The maximum annual amount which can be subject to § 442A option treatment is $100,000 plus any unusual credit carryover. Such carryovers cannot exceed one-half of the $100,000 annual limit. The $300,000 in this example is unrealistic for 1983 since incentive stock options have been generally available for 1981 and years thereafter. Under this option he purchased 10,000 shares of stock for $10 per share at a time when the fair market value of the stock was $40 per share. The preference element, therefore, equals $30 per share or $300,000 in total. Assume, also, that Bill has adjusted gross income, aside from this option, equal to $125,000. Bill's tax liability for 1983 will be computed as follows:

	Regular Tax	Alternative Minimum Tax
AGI	$125,000	$125,000
"Excess itemized deductions"	(40,000)	—
Exemptions	(4,000)	—
"Alternative tax itemized deductions"		(25,000)
Preference items: Incentive stock option (ISO)	—	300,000
Taxable income	$ 81,000	
"Alternative minimum taxable income"		$400,000
"Exemption amount"		(40,000)
Balance subject to alternative tax		$360,000
Tax rate		20%
Alternative minimum tax		$ 72,000
Regular tax liability	$ 25,254	
Excess of alternative minimum tax over regular tax		$46,746

If Bill sells 3,167 shares of stock, the following change would result:

	Regular Tax	Alternative Minimum Tax
AGI before sale	$125,000	$125,000
Gain on sale of 3,167 shares—ordinary income	95,010	95,010
AGI after sale	$220,010	$220,010
"Excess itemized deductions"	(40,000)	—
Exemptions	(4,000)	—
"Alternative tax itemized deductions"		(25,000)
Preference items from ISO	—	204,990
"Alternative minimum taxable income"		$400,000
Regular taxable income	$176,010	
"Exemption amount"		(40,000)
Balance subject to alternative minimum tax		$360,000
Alternative minimum tax rate		20%
Alternative minimum tax liability		$ 72,000
Regular tax liability	$ 72,007	
Excess of regular tax over alternative minimum tax		$7

Notice that Bill's tax liability does not increase by virtue of the sale of stock, and he avoids the second tax that would otherwise result from the sale of stock in a later year.

Bill can repurchase the stock sold if he wishes in order to keep his original investment intact. He will most likely want to diversify into other investments, however.

Alternative Minimum Tax Computation Worksheet

1. Adjusted gross income ________
2. Net operating loss deduction (from post-1982 tax years) ________
3. Line 1 plus Line 2 ________
4. Alternative net operating loss deduction (required on NOLDs from post-1982 years only) ________
    a. NOLD (amount on Line 2 above—post-1982 years only)
    b. Subtract tax preferences included in the NOL ________
    c. Below-the-line deductions used in determining NOL for the loss year ________
    d. Deductions used in determining the NOL for the loss year (Line 4c above) which are also "alternative tax itemized deductions" ________
    e. Subtract Line 4d from Line 4c ________
    f. Subtract Lines 4b and 4e from Line a. This gives you "alternative net operating loss deductions" ________
5. Alternative tax itemized deductions ________
    a. Casualty and theft losses allowable as deductions ________
    b. Wagering losses allowable under § 165(d) ________
    c. Charitable contributions allowed under § 170 ________
    d. Medical expenses with a 10% AGI limitation ________
    e. Estate tax allowed as a deduction under § 691(c) as expense in respect of a decedent ________
    f. Interest paid in acquiring, constructing, or substantially rehabilitating a private principal residence of the taxpayer or the taxpayer's brother, sister, spouse, ancestor, or lineal decedent ________
    g. Interest incurred before July 1, 1982, and secured by property described in 5f above incurred for any reason such as a 2nd trust deed to provide funds to buy a boat ________
    h. Interest expense equal to "qualified net investment income" ________
        1) Sum of interest, dividends, rents, royalties, § 1245 and § 1250 recapture on investment property ________
        2) Net capital gain from sale of investment property ________
        3) Exempt income such as all-savers interest, net interest exclusion, and dividends under § 116 or § 128 ________
        4) Add Lines 5h1, 5h2, and 5h3 (this amount is qualified investment income) ________
        5) Qualified investment expense—above-the-line expenses directly connected with the production of "qualified investment income" above ________
        6) Subtract Line 5h5 from Line 5h4 (this amount is net qualified investment income) ________
        7) Interest expense other than qualified housing interest expenses listed on Lines 5f and 5g above ________
        8) Line 7 not to exceed Line 6 ________
    i. Add Lines 5a, 5b, 5c, 5d, 5e, 5f, 5g, and 5h8 (this amount is alternative tax itemized deductions) ________
6. Amounts includable in income under § 667 deemed distributed by trusts in preceding year ________
7. Subtract Lines 4, 5, 5i, and 6 from Line 3 ________
8. Tax preference items:
    a. Accelerated depreciation on real property ________
    b. Accelerated depreciation on personal property subject to lease ________
    c. Excess intangible drilling costs ________
    d. Excess % depletion over basis ________
    e. Net capital gain deduction allowed by § 1202 ________
    f. Excess amortization of pollution control facilities ________
    g. Reserves for bad debts of financial institutions ________
    h. Value of stock option in excess of option price ________
    i. Excess deductions for mining exploration expense allowable under § 616 and § 617 ________

j. Excess periodical circulation expenditures allowed as deductions by § 173 ________

k. Excess research and development expenditures allowed as deductions by § 174 ________

l. Dividends and interest excludable under § 116 and § 128 ________

m. Add Lines 8a through 8l ________

9. Add Line 7 and Line 8m (this amount is alternative minimum taxable income) ________

10. Select the appropriate exemption amount ________

a. Married filing jointly: $40,000
b. Married filing separately: $20,000
c. Surviving spouse: $40,000
d. Head of household: $30,000
e. Single: $30,000
f. Trust of estate: $20,000

11. Subtract Line 10 from Line 9 (not less than zero) ________

12. Multiply Line 11 by 20% (this is alternative minimum tax liability before the foreign tax credit) ________

13. Allowable foreign tax credit ________

14. Subtract Line 13 from Line 12 (this amount is the alternative minimum tax liability) ________

FOOTNOTES

[1] See S. Rep. No. 91-552, reprinted in 1969-3 CB 423; Boris Bittker, *Fundamentals of Federal Income Taxation* (Boston: Warren, Gorham & Lamont, Inc., 1979), Section 39.4, p. 39-24.

[2] 1969-3 CB 421; Bittker, p. 39-24.

[3] Bittker, p. 39-25.

[4] I.R.C. Section 55.

ANNOUNCING THE

22nd ANNUAL MID-SOUTH BUSINESS OUTLOOK CONFERENCE

December 13, 1984

The Peabody Memphis Ballroom

The 22nd annual Mid-South Business Outlook Conference will be held in Memphis on December 13, 1984, at the Peabody Hotel Memphis Ballroom. The conference will begin with registration at 11:00 a.m. and will adjourn at 1:30 p.m. Frederick W. Smith, Chairman of the Board and Chief Executive Officer of Federal Express Corporation, will give the keynote address. Robert J. Genetski, Vice President and Chief Economist of Harris Bank and Trust Company in Chicago, will present his views on what will occur in the national economy during 1985. In addition, the outlook will be presented for the Mid-South economy in the coming year.

For further information about this conference, call the Bureau of Business and Economic Research at Memphis State University at (901) 454-2281.

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MID-SOUTH BUSINESS JOURNAL

MEMPHIS STATE UNIVERSITY
The FOGELMAN COLLEGE OF BUSINESS and ECONOMICS

MID-SOUTH BUSINESS JOURNAL

Volume V, Number 1 January 1985

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THIS PUBLICATION IS MADE POSSIBLE
IN PART BY A FINANCIAL GRANT FROM

THE NATIONAL BANK OF COMMERCE
MEMPHIS, TENNESSEE

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The MID-SOUTH BUSINESS JOURNAL is published quarterly by the Bureau of Business and Economic Research, Memphis State University, Memphis, Tennessee 38152, in the months of January, April, July, and October, as a service to the business community. Second-class postage paid at Memphis, Tennessee. POSTMASTER: Send address changes to Bureau of Business and Economic Research, Memphis State University, Memphis, Tennessee 38152.

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HIGH TECH, ADVANCED TECHNOLOGY OF FEDERAL EXPRESS AND ITS MEANING FOR OUR LOCAL MARKET

*Frederick W. Smith**

I would like first of all to acknowledge my partner, Jim Barksdale, the chief operating officer of Federal Express, who is chairman of the Dean's advisory group and a major part of Federal Express'success. I would also like to express the appreciation of some 9,500 fellow Memphians (or people who live in the metropolitan SMSA) who work for Federal Express. Our best information is that there are approximately 300,000 wage earners in this general area and about 3 out of 100 of them work for our company. So in trying to determine what I should talk to you about today, Jim and I discussed it and we both decided that based on the marks I got in the study of economics at Yale, which has been very well commented on, that I should stay off that subject, especially on the podium with some of the distinguished speakers you are going to hear from in a few minutes. And because of the relative size of the Federal Express employee base in the Memphis area, that perhaps what I should do is give you an update on our company's activities, and in particular how we have applied technology in our operations. Any successful economic endeavor depends on adding value, and value added is in large measure evolved from utilizing new technologies to do things more efficiently. The Japanese, of course, have shown us that with a vengeance.

The modern industrial age can be divided into three great periods: The harnessing of the power of moving water in the 19th century along with the power of steam led to the industrial revolution and an enormous accumulation of wealth. This was followed by the fossil fuels revolution in the 1870s and shortly after the turn of this century by the application of electricity to the manufacturing process. With the use of small electric motors, plants could be moved farther and farther away from their raw sources of fossil fuels or moving water, and more importantly work could be arranged in the most logical and productive manner possible rather than just by accident of where power might be located geographically. The third wave of the industrial revolution, a term coined by Alvin Toffler, began in earnest at the end of World War II. It was quite different from the first two waves, for instead of harnessing man's physical power, we began to develop machines that could harness and extend the power of the mind—human thought. The introduction of computers changed forever the way machines were applied to the industrial and commercial processes. The explosion of computer power in the 1960s changed the pace of American business in every facet, from the type of skills needed by the work force, to the competitive environment, to the ways products and services are marketed. We felt the eventual impact of this revolution. The transportation business was somewhat slow to recognize the increasing velocity of commercial transactions. Because it now took less time to process data, decisions could be made faster. Even as late as the early 1970s, however, there was no fast, reliable method of moving goods and documents overnight in this country. Federal Express began to fill this gap, providing the essential logistics arm for the information age beginning in 1973. Our business was built on the recognition that the efficient functioning of the modern commercial world depended on the rapid movement of goods and information nationwide on a daily basis. Every night, we pick up over 400,000 packages and documents, transport them through our system, sort them to their proper destination, and deliver them in most cases by 10:30 a.m. the next morning to over 90% of the U.S. population, which will increase to 95% by this May. We also now serve some 51 countries overseas, either directly or through agents. Many times people ask: How did Federal Express do it, and more importantly how does Federal Express intend to remain the industry leader with so much competition? The reasons are varied. First, I think we defined our markets well and succinctly. We recognized a tremendous need in the marketplace for the types of services which we provide. We have recruited an exceptionally enthusiastic work force. But certainly a primary factor was our recognition of a simple fact, just as we could be the pipeline for this new technology-based

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**Chairman and Chief Executive Officer, Federal Express Corporation, Memphis, Tennessee. Presentation at Mid-South Business Outlook Conference, December 1984.*

world, it was also vital that we put that technology to work within our own company. Federal Express has continued to apply the latest technological advances throughout every aspect of our operation, from aviation to planning and logistics to communications. This has allowed us to improve our product and stay ahead of our competitors while increasing the value of our service to customers and making the working environment more pleasant and productive for our employees. The ultimate result has been a high return on assets and equity for the shareholders of our company. To most of our customers, however, our extensive use of technology is practically invisible, probably to you as well. People call us on the phone, we pick up their package, we deliver it the next day to the proper destination, and a few days later they receive an accurate bill and the process is complete. But a careful look behind the scenes reveals the extent to which technology makes this huge process seem so easy. To each of our customers a Federal Express pick-up seems simplicity itself. Call us and a few minutes later one of our couriers appears. But if you knew that at the same time we were also answering over 150,000 other calls between 2:00 and 4:00 p.m., I'm sure you would be somewhat more impressed that our system works as well as it does. To handle this staggering amount of call volume, which is to our knowledge the highest peak-load call volume of any commercial enterprise, we've employed a number of innovations in the field of telecommunications. Our customer call centers handle these calls at eight regional locations, one here in Memphis by the way, with more under construction. Powerful automatic call director systems make this possible. Dispatches are relayed to over 350 field locations for pick ups. This system, which we affectionately refer to as COSMOS, the largest on-line system of its kind in the world, provides the link that holds our telecommunications system together. Each of our field locations and most Memphis departments are tied together on the same database with information on dispatches, traces, and general data. Each day this system handles over 120,000 on-line inquiries, and within seconds displays on the screen for our agents the complete history of anyone who has done business with us before and is speaking to us on the telephone. In addition to our dispatch system we keep in contact with over 12,000 radio-dispatched vehicles at any given time, allowing us to handle, for instance, 2,000 dispatches to 700 couriers in the New York metropolitan area alone in just one afternoon. Federal Express is the largest private user of mobile radios in the world, but even radio waves we found weren't enough given the concentration of messages in the short time period within which our customers require us to operate. The answer has been the development of our DADS system, referring to the Digitally Assisted Dispatching nature of this equipment. In thousands of our vans we have installed small computers with CRTs which allow us to transmit pick-up information digitally, bypassing the voice network totally. It is faster, more reliable, and much more productive since we can use computer knowledge to arrange pick ups in the most logical and least costly sequential order. Once we pick up these 400,000 packages, technology really comes into play keeping up with them. Each of these items is going to any one of over 22,000 separate locations. To get these items to each of those locations without losing any of them is no easy task. To move this volume quickly and dependably, we have assembled a fleet of 65 modern transport jet aircraft, including 727-100s, 15 newly-manufactured 727-200s, including the last one of these aircraft that Boeing will ever produce, and 15 DC-10s. As an interesting aside, I would point out to you that each one of our Jumbo DC-10s can by itself carry as much as our original fleet of 32 Falcon fanjets carried collectively. To make our planes more reliable, we are working with several vendors on a system which we call the Magic Window. This system will allow us to do nothing less than see through fog. Through a combination of digital display, advanced microwave radar, and micro processors placed on board the airplane, we will allow our pilots to see the runway regardless of the fog conditions. This will have an enormous impact on safety (for instance, it could have prevented totally the disaster at Tenerife where the two 747s ran together on the runway), and naturally it will improve the reliability of our services for our customers. For sorting packages we have built a huge facility here in Memphis with over a quarter of a billion dollars in investment. We call it affectionately the SuperHub. Each night, most of the 400,000 items which we pick up are processed within a two and a half hour time span. This facility, and we invite you to tour it, is an amazing network of high-speed conveyance systems, automated sort belts, and computerized monitoring equipment. We can handle 350,000 items in a faster period than any other place on earth with an error rate that is the envy of our industry. Part of what Federal Express delivers is peace of mind. Our COSMOS system is integrated with a bar-coded scanning network which tracks each one of our packages individually as it moves through a gate in the system. This information is then entered automatically at origin and destination stations into the COSMOS network. Throughout our system everyone then has instantaneous access to this vital information on the whereabouts of any of the hundreds of thousands of items we're handling. We will soon expand this so that every courier carries a device about the size of a magic marker which will track a package to its final destination and allow the courier to enter, at destination, the name of the person who has signed for the document, interfaced with the DADS system I mentioned a few minutes ago, and within a few seconds we'll have a real-time proof of delivery on-line regardless of whether the package is being delivered in Bangor, Maine or Washington state. Through project Zodiac, we will also soon introduce a new method of package tracking based on seven- or nine-digit zip codes. This will allow us to become even more automated here at our Hub in Memphis and able to provide better service with fewer mis-sorts, fewer hassles for our employees, and fewer mistakes for our customers. All of this technology in moving packages is great; but if one of our customers' bills is incorrect, we can still lose the confidence of our customer. Again, the sheer numbers are staggering. We send out hundreds of thousands of bills each day. Our Polaris system utilizes optical scanning devices to help us provide more accurate invoices to match the individual airbills. We scan each one of our airbills, delivery records, and all other pertinent documents to be sure our customers pay only for the services they receive. We then store these documents electronically, allowing wider access of this information, faster retrieval, and better answers to our customers' inquiries. It is interesting to note that our system and the Library of Congress are generally recognized to be the two most advanced users of optical character recognition and on-line retrieval of any systems in the world. We are also beginning to offer technological advances in billing, such as electronic meters in our customers' offices that record transactions on miniature sets, eliminating the need for paper airbills altogether. Tape-to-tape billing for larger customers gets us closer still to a completely electronic transfer of funds service to cover the cost of our services. We recognized several years ago that we had to keep pace with the changing nature of our industry. We developed an approach to the technological innovation of electronic mail by devising a system that would dovetail nicely with our existing networks, utilize our existing strengths, and provide a faster alternative to our existing absolutely, positively, overnight services. The result was the somewhat humorously named ZapMail, a new electronic transmission service. With ZapMail we can deliver an exact copy utilizing high-resolution plain paper facsimile equipment, and transaction time is only two hours from the time you phone for a pick up to the time we deliver the transmission. The cost: $25.00 for the first twenty pages and $1.00 per page thereafter. If you bring it to one of our business service centers, for instance one is located here at the Peabody, we'll deliver it virtually any place in the United States of America within just one hour and charge you $20.00 for the first twenty pages. This exciting new product recognizes some of the pitfalls in existing computer technology and electronic mail. It's the ultimate in user friendliness. All you have to understand to use it is how to dial your own telephone. It doesn't require compatible equipment. Our 12,000-person courier force removes the compatibility problem in an instant. It doesn't require rekeying the data you've already generated; it takes a picture of the copy. It's basically as simple to operate as a copy machine and will handle line drawings, story boards, Arabic, hieroglyphics, even doodles. We believe ZapMail is the ultimate synergy between man and machine. It will pave the way for dependable same-day communications, the bridge between today's communications methods and those of tomorrow. Project Sun is designed to work in tandem with ZapMail. In our early days, we knew that the only way to guarantee the reliability of our delivery network was to control every element in the transportation chain. We now feel the same way about our telecommunications services. We feel we must be able to control our communications networks ourselves. We now have in place one of the largest end-to-end satellite communications networks in the world, and we already use leased transponder time for the COSMOS and ZapMail voice and data network. We have applied to the FCC and have every confidence that we will be given permission to launch our own satellites in 1987 and 1988. These satellites will have an innovative double-hop system in which each one of our facilities will be equipped with a small rooftop disk that will transmit data first to the satellite and then to our telehub, probably located here in Memphis, Tennessee, for sorting and routing back to the satellite and then down to the destination disk for eventual delivery of the message. This Sun system, as we call it, will make us virtually independent of other telecommunications companies for these important transactions. The technological boom cannot overlook the human needs of employees on whom we and others will depend to carry out these tasks. We must keep these employees informed of the changes brought about by technology well before these changes occur. We've done this to a fare-thee-well. For instance, last summer prior to launching ZapMail, we had the largest on-line private satellite telecommunications broadcast that originated right here from the Memphis Coliseum. Of course, we have to anticipate the potential issues that any of these new technological systems or pieces of equipment will raise with the people who will have to use them. When we launched ZapMail, for instance, many of our pilots questioned whether this meant the end of our aviation system and thus their jobs. Of course, it didn't, but this had to be carefully explained. People don't like surprises, especially when it affects their livelihood. Technology doesn't replace the need for progressive human personnel policies and practices. At Federal Express we've committed to a host of these. We promote our own employees from within; we have a fantastic stock ownership program, two separate profit sharing plans, and a no layoff policy that commits to our employees that we won't manage profitability on their backs and we've never violated it. We have an open-door policy for communicating and a progressive grievance procedure called the GFT or Guaranteed Fair Treatment policy that has been emulated now by many companies throughout the United States and is the subject of much academic research. This system protects employees from the greatest fear of all and that is being ground up by capriciousness or unfair treatment. This technology must also be user friendly. The simpler, the better. The more understandable, the better. It's not hard to convince my secretary of the need for word processing because it isn't hard to learn and the payoff is immediately apparent. Our couriers, for instance, love the hand-held DADS unit that I mentioned before because it's impressive to their customers and it makes their jobs truly easier. Technology does have its drawbacks, however. We've created thousands of data-entry jobs in this country that are mundane, repetitive, and not very motivational. We have to find ways to either reduce the number of these jobs through more automation or find other ways to provide outlets for these employees to let them expand their income and their horizon. We can't, in short, be a captive in the world of technological change, but a willing contributor; a participant in the technological revolution in which we find ourselves, rather than an observer out in left field. As we offer more technological solutions, we experience somewhat of a domino effect. We become ever more dependent on this complex set and subset of systems. This can diminish our ability to be flexible and recover if there are not adequate backups provided in clever engineering used in the design of the system. Federal Express is committed to be a willing and able participant in this challenging future. We have to be. Supporting technological development in Memphis is one of our major challenges and that's why we've committed to the technical center at over a million dollars in contributions over the next several years and a quarter of a million dollars to other educational centers around and are so supportive of the activities of Memphis State. We are a pivotal element in the logistics support chain for all other parts of the technological age. We carry the micro processors, the computer terminals, the circuit boards, the life-saving enzymes and medicines, and, most important of all, the information so vital to this rapid progress that we all expect and demand of our society. Just as future business successes will be intricately tied to the increasing complexity and efficiency of the modern business world, so will our own operating effectiveness be determined by our ability to employ technology throughout our company and, in my opinion, in our community as well. It can be a fruitful partnership. But it is one that can only succeed by a willingness to look beyond the next year and the next decade. Those who can correctly anticipate the world of the next century will be the very same people who will profit from the changes it will bring, and we and your fellow Memphians who work for Federal Express are determined to be part of that.

THE NATIONAL ECONOMY - 1985

Robert J. Genetski[*]

By way of discussing the outlook for 1985 and beyond, I would like to talk about three topics: (1) the money supply, (2) deficits, and (3) tax reform. And, we've all been given very tight schedules about how much time we have, so I would like to start by quickly summarizing all my conclusions so that if a cane comes out and yanks me off before the end, you will at least have the benefit of the final wrap-up.

In terms of money, I believe what has happened is that the Federal Reserve Board has inadvertently made a mistake, squeezed the money supply, and the current economic weakness that we're witnessing is the result of that mistake. I also believe that the Fed has already loosened or is about to loosen up. As a result, with the appropriate lag, the recovery should resume beginning sometime next spring. By the end of next year, most people are going to look back and say it was a good year—with real growth on balance about 4.0 percent, inflation very moderate, and interest rates about one percentage point lower than they were when Genetski was talking in Memphis at the beginning of December.

In terms of deficits, I know a lot of people believe the deficit is our number one economic problem. I disagree. When I make up a list of things I worry about, the deficit is number thirty-eight. I'll explain why that's true in the course of my talk.

Finally, the area of tax reform is the most important factor that will shape the economy for the future and decide whether or not we have prosperity or economic decay. There is a lot of activity occurring in this area right now. There are a couple of proposals before Congress that are very good. Unfortunately, within the past two weeks we've had a proposal that I view as having some serious problems and which sets back the course of tax reform by five to ten years—that's the Treasury proposal. I'll explain why that is the case and also what I think is going to happen on tax reform during the course of my remarks, if I'm not pulled off stage before the end.

Let me turn first to money and what's happened recently to the economy and what it means for 1985. Back in late spring the Federal Reserve Board moved to restrict the money supply. They really haven't increased the money supply significantly between the end of last spring and right up to the current period of time. When you squeeze money like that, with a lag, it weakens spending in the economy, and you experience the type of economic weakness that we are now going through. The first question we have to ask is, "What made the Fed do it?" Why did they squeeze the money supply six months ago? The answer, I believe, is because the people at the Fed believe in what I call an economic myth. It is a widespread myth, very popular, and taught in a lot of schools. That myth is that budget deficits stimulate spending and lead to higher inflation. Now if you believe in that myth and you forecast economic activity, you forecasted a boom in the economy and higher inflation for the end of 1984. If you just forecast and no one pays any attention to your forecast, you haven't done any damage. But if you are in charge of economic policy and you believe in that myth, then you did exactly what the Fed did—try to fight the economic boom expected for the end of 1984. They squeezed the money supply and thought they were doing the right thing. Now, I'm not terribly worried. We all realize that the Fed has 300 Ph.D. economists working for them. And, very frankly, I felt confident that sooner or later one of those economists would notice the economy was heading down, not up, and the end result would be a stimulus to the economy, more money coming in, and by spring the economy would be back on track.

The reason I'm so optimistic is that the fundamentals of our economic recovery are very strong. That wasn't always the case. Several years ago something called the "productivity trend," the factor that determines our living standard, was essentially flat, showing no increase over a business cycle. That meant that living standards were not increasing. It also meant that if the Fed made a mistake such as the one I believe they've made in the past six months, spending would go down, and we would be in a serious recession. Then when the Fed discovered it had made a mistake and put the money back in, we'd recover. However, even after the recovery we would be no better off than we were when we started. That was the situation when our fundamentals were very weak. Today, according to our estimates, that productivity trend is increasing by about 1.5 to 2.0 percent per year. In this environment if the Fed makes a mistake, the economy weakens as we've seen, but they have time to discover that they've made the mistake, get the money back in, and once we recover, we're better off than when the whole situation started.

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The most important question in economics is what determines that trend—what determines whether productivity and living standards are growing 2.0 percent a year or 0? Why it is so important is that if you continue the trend out, either the zero trend for ten years or the 2.0 percent increase in productivity for ten years, what you find is that at the end of ten years what we're talking about is an additional trillion dollars a year in output for the economy. That's an additional $8,500 on average per worker. That's the difference between economic success and economic failure. So what we have to understand is what caused that productivity line to change. My answer is that the single most important factor in the past three decades in our economy has been our tax policies. In a study we did, we found that there were nine shifts in the economy's productivity trend in the past thirty years. On five occasions it deteriorated; many of those occurred in the past three decades. On each of those five occasions, tax rates in our economy were being increased. There were four occasions when the productivity trend improved. On each of those occasions, tax rates were being cut. The two most recent occasions when the productivity trend improved were 1982 and 1983. Now for 1984 and 1985, we calculate no significant change in the tax rates that are relevant to this productivity trend. As a result, we continue to have that 1.5 to 2.0 percent increase in productivity for these years, and things look pretty good.

There is a problem as we go beyond 1985. That problem is that there's a built-in increase in the tax system. How many saw Walter Mondale's acceptance speech? A lot of Republicans here. Well, let me tell you what he said. He said that there's a secret tax increase, a secret plan to increase taxes that is going to go into effect regardless of who's elected president. I don't think he realized just how accurate that statement is. There is a built-in tax increase in our current tax system. Anyone below the 50.0 percent bracket who has an increase in income over and above the inflation rate is going to be rewarded by getting kicked up toward a higher tax bracket. Although that may seem trivial, our estimates are that it will be powerful enough to slow the growth in productivity in the late 1980s, if we allow it to occur.

How does the deficit fit into this particular problem? We all know that there are many people who feel that the deficit is the number one problem facing our economy. I've already said I put it further down on my own list. The reason for that is that deficits do not tell us anything of any importance about either government spending or tax rates, both of which are important. They don't tell us how fast government spending is increasing, don't tell us whether or not the money being spent is being spent wisely or unwisely, and don't tell us anything about tax policy—whether or not tax policy is such that it's encouraging growth or discouraging growth. We can have a deficit that reflects very sound economic policy. We can also have a deficit that reflects very unsound economic policy. And, incidentally, the same is true for a balanced budget or a surplus. We only have to go back five years to 1979 when we experienced what is as close to a balanced budget as we will get for sometime to come. The budget deficit in 1979 was 1.0 percent of GNP. Did that mean that we were headed for low interest rates, low inflation, and strong growth? No! We were headed for economic disaster, not because we came close to balancing the budget, but because of how we did it. Government spending was running out of control, and higher tax rates were increasing the tax take by the government even faster than the increase in spending. Today, the situation has changed. Government spending has slowed down quite a bit, and more important than that, the tax structure is such that we are experiencing productivity increases and a fundamentally strong economy.

But it is the tax issue that I really want to focus on, because in my mind this is not only the most exciting development, it's also potentially the most important development for the future direction of our economy. There are two proposals currently before Congress that are fairly good proposals. One is the Republican proposal by Congressman Kemp and Senator Kasten. They want to have what is called a flat tax. No one pays much higher than 25.0 percent, the single tax rate, and for individuals with incomes at $40,000 or below there are huge deductions and earned income credits designed to get rates down further. When we took the provisions of this tax bill into account and put them into our model, what we ended up with was explosive productivity growth, no inflation, and low interest rates, such as 7.0 percent prime, for as far out as the eye could see. In addition, it is very simple. It took our analyst 30 minutes to calculate a typical high-income tax return. An interesting side effect of this bill, since it is so simple and since you do have such great economic performance, is that tax lawyers and tax accountants will join economists in the unemployment office should it ever go through.

The Democratic alternative to Kemp-Kasten, called the Bradley-Gephardt bill, is also a reasonably good bill. The tax rates are not all that different from Kemp-Kasten; they're a little higher. The big problem with Bradley-Gephardt is that nothing is indexed for inflation. Kemp-Kasten indexes all the deductions so that the government can never profit by inflating the economy. Under Bradley-Gephardt, the government can increase its revenue whenever inflation occurs. If you give the government an incentive to inflate the economy, I believe it's logical to assume that they will go ahead and inflate the economy. The bill is still simple—it took about two to three hours to fill out a typical form—and initially it does cut tax rates. When we put these assumptions into our model, initially we get strong economic growth, low inflation, and lower interest rates. Then, a couple of years out, we start to get higher inflation, higher interest rates, but still more growth than we do under the current tax system. So we can get higher inflation and probably a couple of economic cycles. It's still a simple bill, though, and the side effects are such that economists get to keep their jobs; but the tax lawyers and accountants still lose out.

What we really should concentrate on is the President's view on tax reform. That's very important to look at. How many saw the President's acceptance speech at the Republican Convention? Okay! Now I know a lot about my audience. You might recall that during that speech—between a half hour of Democrat bashing and flag waving—there was one minute of substance when the President told us what he wanted to do for the future. If you can remember, halfway through the speech he said, "I want to get the tax rates of every American further down, not up. If we get them down far enough, the world will beat a path to our door and no one will hold us back." Now, I don't know how many of you heard him on the stump. I did in Illinois. I read his speeches when he was on the stump around the rest of the country, and the same thing was said on those occasions. The President, himself, may be the only one in his administration who believes that tax rates are still too high. But I suppose if there was only one person I could have believing that, he's the one I'd want it to be.

I have to admit, for those of you who may have noticed, the President did forget during his first debate that he wanted to get tax rates down. He never really mentioned it, but I think there's a reason for that. If you remember the debate was late at night. We all know the President likes to get to bed early. This is not an age issue. I like to go to bed early; I also get very tired late at night. I think he simply forgot what he wanted to accomplish in the next four years. He lucked out though. Remember the second debate? There was a conflict with Monday night football, so they had to move the debate up earlier in the evening, and he was wide awake and really shined in the second debate.

Now the President does, I think, want to get the rates down. A year ago he told the Treasury to please go and develop a plan to do that. The Secretary of the Treasury immediately turned to the bowels of the Treasury and asked the career bureaucrats, the tax lawyers and accountants, many of whom work for the IRS, to please develop a plan to simplify taxes and get the overall tax burden down. Well, you know, asking the IRS to come up with a simple tax plan is like putting the fox in charge of the chickens. What they ended up with was a plan that appears to alienate almost every special interest group you could conceivably alienate. In addition, it is not simple. It took our analyst two days to try and determine the tax liability of a typical household, and, after completing the forms, she had little confidence that it was done right. She concluded that professional help would be a necessity under the Treasury plan. Tax lawyers, accountants, and economists will have no fear of losing their jobs given the Treasury plan.

On balance, my view is the odds are against meaningful tax reform. But we really shouldn't give up. In President Reagan we have a president who is extremely capable and whose economic instincts are sound. Over and above ability, he's got something that is even more important and we ought to take it into account—luck! And believe me if you've ever got the choice between smarts and luck, you really want to take luck! What was the most important development that helped the President get his programs through Congress in 1981? He got shot. When he got shot, the way he handled himself gained the respect of almost everyone. At least for a brief period no one wanted to stand in the way of any of his programs. He had very little compromising to do in 1981 to get all of his programs through.

So this president is not only good, he's lucky. What does he do? He hands the assignment for tax reform to the Treasury, they hand it to the IRS, and the IRS comes out with a terrible plan that alienates an awful lot of people. What happens then? Some people are so afraid they're going to get the Treasury plan that they've been running over to Congressman Kemp's office, running over to Senator Bradley's office and saying let me look at that proposal you have again, because if it's a choice between this one and that one, we may really want to favor this one. Don't count it out. While the odds are against it, there's still a good chance tax reform will go through. If it does, then, in my judgment, for this economy the best is yet to come.

AN ECONOMIC REVIEW AND OUTLOOK FOR THE MID-SOUTH

*Roger K. Chisholm**

I wish I could write that this forecast is good news for all readers. That is not the case. There is only a probability of a recession before the end of 1985, but economic growth will be much slower compared with the present. Some industries may even prosper, while others will continue to experience economic distress. The slower growth will have far-reaching effects for all of us.

As with any forecast, there are a number of considerations which undergird the projections. These suppositions are most easily dealt with at the beginning.

- The federal budget for 80% of 1985 is already in place. We know what to expect. If the economy slows more than anticipated, then the deficit may grow to be even larger than currently projected, but that is the only surprise that can happen. All the talk about changing the tax laws or cutting or at least capping expenditures to reduce the deficit are for the next fiscal year. Similarly, tax changes from Nashville, up to and including an income tax, will not affect the economy in 1985.
- The Federal Reserve has shown some sign of allowing faster money supply growth and easing of credit. However, no additional easing seems likely unless the economy should actually slip into a depression.
- The dollar should continue to be very strong. In the Mid-South that is a negative factor, for it will continue to hamper our efforts to sell our products abroad. The U.S. will continue to run a deficit in foreign trade, but will also continue to attract foreign savings. In fact, more direct investment from Europe is expected. The latter effect will help to shore up a sagging economy, but will increasingly put us into debt to residents of other nations. Should the inflow cease, the probability of a recession becomes much greater.
- There will be a new farm bill in 1985. It will have little effect on the 1985 economy. Farm income will not improve next year, and farmers are carrying debt levels which are hard to service, let alone reduce. Farmers will not be much help in improving the Mid-South economy.

As we approach a possible peak in the business cycle, the future is always more uncertain and the economic signals become very mixed. It is extremely difficult to move from a phase of rapid growth to slower growth without inducing a contraction. We may be able to do it. There are signs we have done it in the Mid-South. The national economy may also be able to avoid a recession, at least for a year or so.

First, let us look at what has happened in the Mid-South economy over the past year. We will use the coincident index series, which is the widest measure of economic activity at the local level. Compared with a year ago, the economy has grown at 6.2%, exactly matching the 1982 to 1983 growth rate. However, there are signs of an economic slowdown. Since the beginning of the year, growth has been at a lower 4.7% compound annual rate. Since last summer the rate has been 5.3%, but for the most recent month is only 2.1%, compounded on an annual basis.

Another important measure of economic activity is employment. Total employment grew 4.5% compared with a year ago. Non-agricultural employment grew 2.3%, and manufacturing employment grew by only two-tenths of 1.0%. Non-manufacturing employment grew at a 2.7% compound annual rate. Since the labor force grew at a 2.2% rate over the same period, noticeable gains have been made in agricultural and other areas of employment. As a result, the unemployment rate has come down from 9.0% a year ago to 7.1% as of the most recent report, a whopping 21.1% decline.

Construction, especially of residential units, showed a mixed pattern. Permits and starts will be virtually unchanged in 1984 compared with 1983. Yet sales of new one-family units will be up by 51.0%. In addition, there was an increase of 7.1% in the number of resales. Thus, the inventory of unsold units has been reduced, and the upturn in both permits and starts in the fourth quarter seems justified.

**Chairman, Finance, Insurance, and Real Estate Department, Memphis State University, Memphis, Tennessee. Presentation at Mid-South Business Outlook Conference, December 1984.*

Retail sales also show improvement over last year. In the most recent month available, retail sales increased 23.0% compared with 1983. However, if we compare the first ten months of 1984 with the same period in 1983, the increase is 17.6%. Growth in retail sales turned down between the second and third quarters but turned up again as the holidays approached. Inflation has a very small influence on retail sales today, adding only 1.4% to retail prices over the past year.

Now let us turn to the forecast. The difficult part of the forecast is not deciding what will happen, but in calling the timing. It is almost certain that we are nearing a business cycle peak and a recession will begin. The problem is pinpointing the peak as to its timing. The economy has moved from a period of very rapid expansion to one of lower rates of growth, but has not yet turned down. If we succeed in sustaining the lower growth rate, we may escape a downturn for several quarters to come.

There are reasons to be optimistic about the Memphis economy. First, our index of leading economic indicators, after declining from September 1983 to February 1984 by 2.6%, has resumed its upward path, increasing by 3.8% on an annual compounded basis. Thus, we seem to have survived the slowdown and can now expect a slower but surer growth into next year. Further, both the diffusion index and the average length of run measures confirm that there is still considerable expansion left in our economy. If our analysis of the indices is correct, the concurrent index of our economy, which stood at 162.28 in November, will reach 166.50 by this time next year. That is a modest but still positive 2.6% compound annual growth rate. As in 1984, the greatest gains will come early in the year. By year-end the economy will be very flat, but I do not at this time anticipate that the recession will have begun.

Now let us turn to employment. We are experiencing considerable change in the mix of employment in the Mid-South area. Thus, the totals are the result of numerous changes, some of which offset each other. For example, government employment has been declining at a 1.3% annual rate for the past five years. This decline is forecast to continue in the Reagan Administration, so government employment falls to 58,900. Service employment has been growing at 3.1% annually. This trend is forecast to continue, so service employment reaches 85,300 next year. All non-manufacturing employment will increase to 310,200, about two-thirds of 1.0% increase. Employment in manufacturing has been falling at a 4.3% annual rate over the last five years. However, last year manufacturing employment actually increased. A small increase is forecast for next year to 52,100. Thus overall, total employment will rise to 382,100, or an increase of about one-half of 1.0%. This will not be enough to absorb the increase in the labor force, so we should see unemployment rates again above 8.0% by year-end in the Mid-South area.

Before talking about housing and construction, I will have to talk a little about interest rates. Most forecasters failed to anticipate both the extent of the increase and the subsequent fall in rates over the past year. Some money managers have given up on rate forecasts altogether. The monetarist economists have suggested that we need to pay attention to money supply and forget about rates. Well, we got what we asked for, but not necessarily what we wanted. Rates have fallen fast recently. They could even fall more before year-end as the economy is softer than many anticipated. The slower growth of the economy will enable rates to remain low for a while. But, the slower growth of the economy will result in tax revenue shortfalls adding to the federal deficit. Coupled with growing business credit needs and higher inflation rates by later next year, rates will again rise. By year-end, short rates should be back in the 10.0% to 11.0% range; long rates will be in the 12.0% to 13.0% range. Mortgage rates may not go much higher than they are now. Any forecast of municipal bond rates must be given with a wide range of possible outcomes.

With that in mind, let us turn to a housing forecast. From now until next spring, lower interest rates will offset the slowing economy, and housing activity should be brisk. When rates rise, as they surely will, things will slow down again. Permits will be slightly higher, reaching a total of 3,500 for next year. But because of the timing and with some inventory accumulation, starts in 1985 will match the 2,900 level of 1984. If buyers respond as I think they will this winter and early next year, then new single-family units sold will total 2,850, a modest 6.0% increase from this year.

Retail sales also will be greatly affected by the interest rate pattern. For the Mid-South, additional consideration must be given to continued economic troubles in agriculture and to the changing labor force mix. The purchase of big-ticket items such as automobiles and housing-related items should be stimulated by lower interest rates this winter and spring. But rising interest rates and declining consumer confidence will come into play later in the year. Durable goods should finish 1985 with total dollar sales of $1,242,501,000.00, up 4.9% over 1984. Non-durable goods will increase faster than personal income to $3,421,779,000.00, an increase of 3.8%. Total retail sales will top $6.5 billion at $6,619,714,000.00, a 3.9% increase.

Personally, I am more concerned about the Mid-South economy than this forecast indicates. I will be happy if we achieve the forecast results. They represent modest gains, but gains nonetheless. Our data indicate a good probability that we will not slip into recession during 1985. I have learned to trust my data and not play hunches. However, like the weather forecaster, a 60% chance of sunshine means a 40% chance of rain. There is at least a 40% chance that we will experience a recession nationally. While we are insulated from the national economy to a considerable extent, if a recession occurs, then there will be some bad economic news for some segments of the economy of the Mid-South in 1985. We will all applaud the economic gains it appears we will achieve in the Mid-South and hope that any adverse effects are minimal.

ORGANIZATIONAL COMMUNICATION: IMPLICATIONS FOR MANAGERIAL CONTROL AND COORDINATION

*Coy A. Jones**

This article points out the often overlooked potential value of organizational communication research for improving management effectiveness. First, the article discusses the importance of effective organizational communication for improving cooperation and coordination. Then, some of the organizational communication research is reviewed. Finally, the implications of this research for improving management effectiveness are discussed.

The Importance of Organizational Communication

The ability to communicate effectively has been recognized as essential by most major management theorists. Frederick W. Taylor, when describing the art of management, said, "The relations between employer and men form without question the most important part of this art" (18, p. 21). "Relations" referred to by Taylor can be perceived as the interaction and communication one person experiences with another. Chester Barnard explores extensively the executive function of achieving coordination and cooperation through communication (1). This idea is further developed by Herbert Simon, who classifies transmission of decisions and the channels of communication as mechanisms of organizational influence (17). Douglas McGregor lists "open communications" as one of the unique features of an effective managerial team (13, p. 162). From this illustrative sampling of comments, it becomes apparent that the ability to communicate effectively within a formal organization implies more than personal communication skills.

To communicate effectively in an organization one must know how to obtain needed information and how to disseminate information to others so that it is received and understood properly. This ability requires knowledge of the organizational structure. Weber contends that bureaucracy is technically superior to other forms of organization for reasons of precision, speed, lack of ambiguity, etc. (19). The concern here is that one of the main means of securing these advantages is the formal lines of communication established by the bureaucratic form of organization. Formal lines of communication, which are well known to organization members, are intended to obtain cooperation and coordination of efforts to achieve goals.

One of the major goals of organizations is to reduce and control the variability of human behavior in order to more accurately predict performance and productivity (9). Communications networks are one of the mechanisms for organizational control and coordination. To use this mechanism effectively, certain rules must be established and understood by organization members. According to Farace, Taylor, and Stewart (5, p. 274), "Within all organizations, a set of formal and informal rules exists which governs the conditions under which information exchange takes place." These authors claim that communications rules have five primary dimensions and that these rules are the determinants of communication effectiveness. Primary dimensions are (1) structure of message movement, (2) the messages themselves, (3) the communicators, (4) media characteristics, and (5) a potpourri of other effectiveness criteria.

Cushman and Whiting (3) are cited for their distinction between content and procedural communication rules. Content rules describe the conditions under which certain topics may be discussed, the appropriate terminology, and the "meaning" invoked by a communication. Procedural rules guide individuals in the selection of a method of transmitting messages, the timing of information flow, document preparation and dissemination, and to whom information may be addressed. That is, procedural rules determine the ways in which people communicate and interact in the system, whereas content rules determine what is to be communicated and the "meaning" attached to a communication act (5, p. 275).

Successful coordination requires that communications be accurate and result in agreement and understanding. Achieving accuracy and agreement depends upon the communication skills of the communicators and their predictive perceptions of each other. "Accuracy" is reflected

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MID-SOUTH ECONOMY

BUREAU OF BUSINESS & ECONOMIC RESEARCH THE FOGELMAN COLLEGE OF BUSINESS AND ECONOMICS MEMPHIS STATE UNIVERSITY

STATISTICAL SUPPLEMENT

THE MID-SOUTH ECONOMY

After twenty-four months of expansion, economic activity at the national level is showing signs of leveling off. Growth in the nation's real Gross National Product slowed to a 1.6 percent annual rate in the third quarter of 1984, down from an average annual rate of 5.6 percent over the last eight quarters. Additionally, the pace of personal consumption expenditures has been lackluster since the summer. As a result, the earlier rapid declines in unemployment quickly came to a halt. However, as is typical of a maturing expansionary phase, not all the indicators of economic activity are pointing in a downward direction. For example, gains in industrial production and productivity remain robust, and constant dollar gross private domestic investment is 30.4 percent higher than the levels recorded a year ago. Employment growth has been translated into solid gains in personal income, up 9.8 percent from a year ago. In addition, over the last twelve months inflation has remained subdued, with producer and consumer prices rising 1.9 and 4.1 percent, respectively.

Preliminary data for the fourth quarter indicate the expansion may not have faltered but merely shifted to a more moderate growth path. The much-heralded Index of Leading Indicators registered a sharp rise in November, and the "flash" estimate of real GNP showed an increase of nearly 3.0 percent. Short-term interest rates are currently at the same levels they were a year ago at 8.9 percent, with corporate Aaa bonds at 12.3 percent. However, with household, business, and government credit needs all poised to move higher due to higher levels of economic activity, only Federal Reserve accommodation will be able to forestall an upturn in nominal interest rates which could impede further economic growth.

For the Mid-South states growth rates in key business indicators continue to show improving conditions, with total employment climbing 4.5 percent over last October compared to the national rate of 3.3 percent. Total personal income in the Mid-South grew 9.4 percent from second quarter 1983 to second quarter 1984, slightly underperforming the nation's gain of 9.8 percent. Sales tax collections across the Mid-South continue to register solid gains from year-ago levels. However, the unadjusted aggregate unemployment rate remains at the relatively high rate of 9.5 percent compared to 10.6 percent in October 1983.

Labor

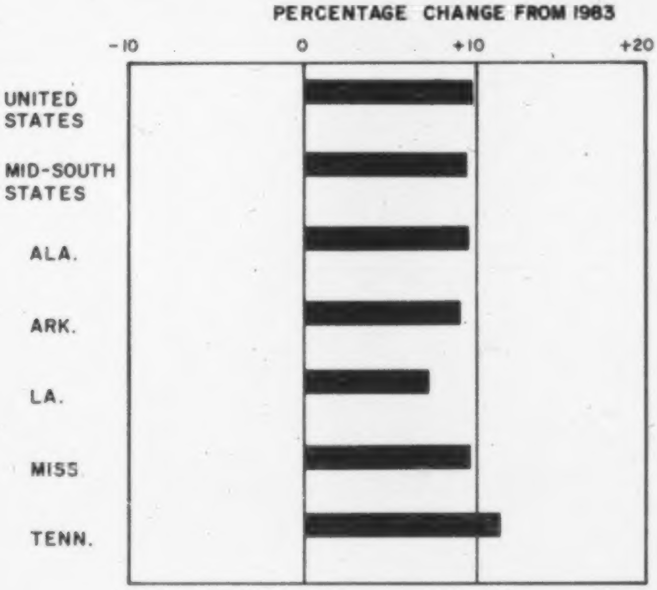
Unemployment rates for both the Mid-South and the nation fell sharply during most of 1984. Recently, however, the pace of decline has tapered off. While the number of persons unemployed across the Mid-South dropped 8.3 percent from last October, the number of people in the civilian labor force increased 2.8 percent. Mid-South nonmanufacturing employment growth has kept pace with the nation's gains, but manufacturing employment growth has fallen behind. Since October 1983, manufacturing employment registered a modest gain of 1.4 percent, with average weekly production hours falling 1.0 percent.

Nationally, the unemployment rates for men and women over 20 are 6.3 and 6.9 percent, respectively. The main problem area lies with men and women 16-19 where the unemployment rate is 18.8 percent. The near-term outlook for employment remains good due to the fact that the help-wanted advertising index is currently 32.0 percent higher than it was a year ago. However, only moderate declines in the unemployment rate are projected for 1985, with the unemployment rate averaging about 6.8 percent.

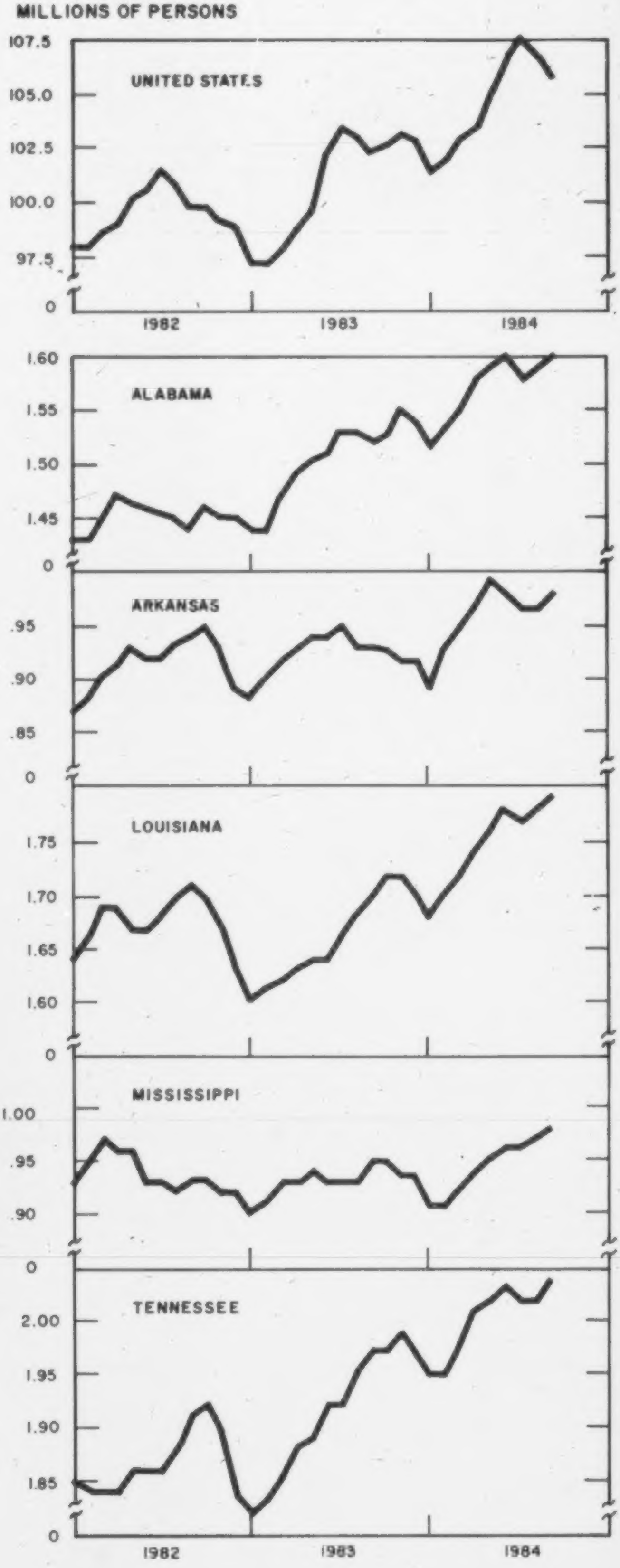
Construction

For the twelve months ending September 1984, the dollar value of total building activity in the Mid-South (excluding Arkansas) rose 16.1 percent compared to the national increase of 18.6 percent. Residential building activity in the Mid-South continues to register solid gains, with the number of permits issued for dwelling units up 13.3 percent compared to the nation's increase of 9.9 percent. Mississippi and Tennessee registered the best gains, primarily in the multi-family units, while Louisiana permits declined because of a drop in permits for single-family units. Non-residential construction activity also

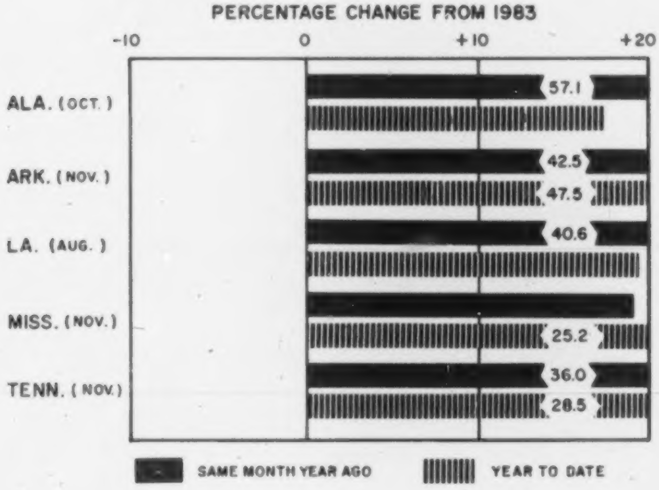
PERSONAL INCOME - II QTR. 1984



TOTAL EMPLOYMENT



SALES TAX COLLECTIONS 1984



SOURCES: BUREAU OF ECONOMIC ANALYSIS
STATE DEPARTMENTS OF EMPLOYMENT
SECURITY AND REVENUE.

remains robust. The nation, as well as the Mid-South, recorded substantial gains in industrial buildings, offices, and stores. Hospital and school construction was generally down across-the-board. Mid-South construction employment rose 6.7 percent from last October compared to a national increase of 8.5 percent. However, on the national level, the unemployment rate for construction workers remains at a traditionally high 13.5 percent.

Currently, many observers recommend caution in the housing industry outlook for 1985, with activity expected to fall slightly below 1984's level. However, the National Association of Home Builders reports a sharp increase in housing activity in October 1984, signalling a big improvement in the six-month outlook for housing starts.

Finance

Commercial bank deposits in the Mid-South (excluding Arkansas) were 7.5 percent higher than a year ago, but fell under the national increase of 9.1 percent. Savings deposits registered a modest gain of 3.6 percent nationally but slipped 0.4 percent in the Mid-South. The household savings rate has increased recently, but consumer installment debt also continues to rise. Commercial bank loans across the nation rose 14.2 percent above the levels of a year ago, and the key commercial paper rate was 12.3 percent—the same level as a year earlier.

The federal deficit holds the key to the future behavior of interest rates. The continuing low levels of inflation

LABOR	United States (Sept.)	Mid-South States Alabama (Oct.)	Arkansas (Oct.)	Louisiana (Oct.)	Mississippi (Oct.)	Tennessee (Oct.)
Civilian Labor Force	113,843,000	1,799,500	1,058,600	1,991,100	1,111,500	2,260,100
Percent Change Year Ago	+ 1.5	+ 1.5	+ 0.8	+ 3.4	+ 3.7	+ 2.0
Unemployed	8,382,000	192,900	87,900	195,800	118,100	184,700
Percent Change Year Ago	-14.7	- 7.1	+ 0.6	- 3.3	+ 5.8	- 8.8
Unemployment Rate						
1984	7.4	10.7	8.3	9.8	10.6	8.2
1983	8.8	12.3	9.3	10.9	11.0	9.5
Non-Agricultural Wage & Salary Employees	94,671,000*	1,353,600	789,000	1,581,000	816,300	1,830,400
Percent Change Year Ago	+ 4.0	+ 1.4	+ 3.3	+ 0.1	+ 1.6	+ 3.8
Manufacturing Employment	19,601,000*	347,500	212,100	182,700	211,500	493,200
Percent Change Year Ago	+ 4.8	+ 0.4	+ 3.1	+ 0.4	+ 0.6	+ 1.7
Non-Manufacturing Employment	75,070,000*	1,006,100	576,900	1,398,300	604,800	1,337,200
Percent Change Year Ago	+ 3.8	+ 1.7	+ 3.4	+ 0.0	+ 1.9	+ 4.6
Average Weekly Earnings of Production Workers in Manufacturing	$375.25	$331.70	$297.14	$407.71	$280.49	$318.30
Percent Change Year Ago	+ 3.5	+ 4.8	+ 2.3	+ 4.6	+ 1.3	+ 1.9
Average Weekly Hours of Production Workers in Manufacturing	40.7	40.9	40.1	41.1	40.3	40.6
Percent Change Year Ago	- 0.2	- 1.7	- 2.0	+ 3.5	- 1.0	- 1.2
Average Hourly Earnings of Production Workers in Manufacturing	$ 9.22	$ 8.11	$ 7.41	$ 9.92	$ 6.96	$ 7.84
Percent Change Year Ago	+ 3.7	+ 6.6	+ 4.4	+ 1.0	+ 2.4	+ 3.2

*Seasonally adjusted.

Source: Departments of Employment Security and Survey of Current Business.

CONSTRUCTION[1] September 1984	United States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Total Building Percent Change Year Ago	+18.6	+48.5	N.A.	+ 0.6	+31.2	+16.6
Residential Building Percent Change Year Ago	+17.5	+21.9	N.A.	+10.8	+33.7	+19.9
Non-Residential Building[2] Percent Change Year Ago	+20.1	+72.6	N.A.	- 7.9	+27.4	+12.4
Total Dwelling Unit Percent Change Year Ago	+ 9.9	+ 9.7	N.A.	- 1.0	+36.5	+24.1

[1] Twelve-month cumulative rate.

[2] Non-residential data exclude the cost of construction for publicly-owned buildings.

Source: The Federal Reserve Bank of Atlanta from data supplied by the Bureau of Census.

have not yet been fully reflected in long-term interest rates, suggesting the likelihood of lagged declines in these financing costs. However, the "crowding out" consequences of deficit financing are expected to be felt throughout 1985, exerting upward pressures on the course of short-term interest rates. The outcome of this tug of war will hinge on the Federal Reserve's ability to steer a steady course between inflation and recession.

FINANCE 1984	United States	Mid-South States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Member Banks as of 10/6/84 Percent Change from Comparable Date 1983							
Total Deposits	+ 9.1	+ 7.5	+11.5	N.A.	+ 5.9	+ 6.5	+ 7.0
Demand Deposits	+ 0.2	- 2.2	- 0.2	N.A.	- 5.0	- 3.5	+ 0.5
Time Deposits	+16.6	+14.0	+18.1	N.A.	+11.2	+14.1	+14.1
Savings Deposits	+ 3.6	- 0.4	+ 4.7	N.A.	+ 2.3	- 4.8	- 4.3

Source: The Federal Reserve Bank of St. Louis and the Federal Reserve Bank of Atlanta.

SAVINGS AND LOAN ACTIVITY October 1984	Alabama	Arkansas	Louisiana	Mississippi	Tennessee[1]
Mortgage Loans Made (millions)	$60.3	$ 79.3	$187.4	$ 60.3	$62.2
Percent Change Year Ago	+ 9.0	- 43.3	+ 3.5	+ 39.6	-20.3
Percent Change Year-to-Date	+22.6	- 24.6	+ 22.9	+ 48.8	+26.0
Net Savings Flow (millions)[2]	$58.9	$ 74.3	$241.4	$ 27.8	$32.2
Percent Change Year Ago	+77.4	+204.5	+252.4	+826.7	+12.7
Percent Change Year-to-Date	-18.2	- 12.4	- 7.9	+ 4.7	-42.6

[1] Figures are for total loans made.

[2] Net savings flow equals new savings received plus dividends credited minus savings withdrawn.

Source: Federal Home Loan Banks of Little Rock, Cincinnati, and Atlanta.

TENNESSEE ECONOMY

The Tennessee economy continues on a path of strong economic growth, with consumer spending and employment gains leading the way. From third quarter 1983 to third quarter 1984, the growth in retail sales and non-agricultural employment was higher than the national rate. Also over comparable periods, growth in Tennessee's civilian labor force and personal income outperformed the pace of the nation. For October 1984, Tennessee's unadjusted unemployment rate stood at 8.2 percent, the lowest of the five Mid-South states. Manufacturing employment in Tennessee grew 4.7 percent from third quarter 1983 to third quarter 1984 compared to the national increase of 5.7 percent. Tennessee's non-manufacturing employment, however, grew much faster than the national rate, up 5.7 percent versus 4.2 percent, respectively.

Tennessee's farmers faced wet fields and an early frost which delayed harvest and damaged soybean and cotton yields. Corn production holds steady, and the tobacco crop is expected to produce record yields. Egg production and milk production recorded declines over the levels of a year ago, with red meat production rising 3.0 percent. While the index for prices paid by farmers increased a modest 1.9 percent from last October, the index of prices received by Tennessee farmers dropped 5.2 percent.

According to the *1983 Annual Report* of the Tennessee Department of Community and Economic Development, foreign investment in Tennessee between 1978 and 1983 totaled $1.1 billion. These investments represented 36 new plants and 59 expansions and accounted for 11,429 new jobs. Elsewhere, the *1982 Census of Retail Trade—Tennessee* counted 39,467 retail establishments in Tennessee or about 1 for every 116 Tennesseans. Approximately 56.0 percent of all retail establishments are categorized as individual proprietorships.

Finally, the near-term outlook of the Tennessee economy points to a moderation in economic activity. Initial claims for unemployment in November 1984 jumped 9.2 percent over last November, and the dollar value of permits issued for single-family housing units, an indicator of future housing activity, remained unchanged from the levels of a year ago. Additionally, over half the counties in the state registered increases in their unemployment rates for November 1984.

by the ability of one communicator to understand the position or view of another (5, p. 288; 4, pp. 141-147).

Communication scholars argue that communications can change knowledge, attitudes, and behavior. To maintain a degree of influence over these changes, organizations must know who their key communicators are in each communications network. It has been found that key communicators are often managers or supervisors. Yet, if these individuals are to communicate effectively, they must know what is expected of them and must be able to achieve those expectations.

Review of Research Providing Implications for Management

Researchers generally agree that communcation is more effective when subordinates are satisfied with their work situation, trust their superior, and perceive their superior as having adequate influence in the organization (14). Jablin (8) found that both "open" and "closed" communication groups preferred confirming or disagreeing responses to responses of accedence, repudiation, or disconfirmation. "Confirming" responses occur when the superior-subordinate relationship is positive and the message content is positive. "Disagreeing" responses occur when the superior-subordinate relationship is positive, but the message content is negative. Therefore, there is an apparent preference for positive superior-subordinate relationships.

Communications Networks

Some communications networks are planned, while others are emergent. The planned network generally follows the authority hierarchy of responsibility being communicated down and accountability reports flowing up the hierarchy. The emergent network evolves with the formation of informal groups and is commonly referred to as the "grapevine." Both communications networks can be manipulated to some extent by individuals who, by virtue of their positions in the network, have control over the flow of information. Before examining communications network roles, it may be helpful to establish an understanding of network functions and structure.

Network Functions. Research has made possible the identification of networks by function. The major communication functions that have been identified are: work or production, maintenance, motivation, integration, and innovation (4, pp. 55-59). Although details are beyond the scope of this article, there is some value in defining three of these functional networks:

Production	- messages to promote getting the job done
Maintenance	- messages aimed at keeping organizational systems and components operating as intended
Innovation	- messages seeking out and exploring new alternatives key communicators should be aware of and use of the appropriate network for specific messages

The identification of these networks makes it possible to select the appropriate one for a particular message.

Network Structure. The structure of a communications network appears to be determined primarily by who has or takes the responsibility of passing information and how they pass it. Centralized networks evolve if all information flows through one person or very few people. Networks become more decentralized as information flows more freely to all members (see Figure 1). Collins and Raven (2, pp. 154-155) discuss and summarize the major research on network structure. They offer evidence that centralized networks are faster and more accurate when solving simple problems, but that decentralized networks are faster and more accurate when solving complex problems. Member satisfaction was highest in the decentralized networks. Key communicators are in the position to decide and implement the type of network structure most appropriate for their communications. With this understanding of network functions and structure in mind, a more coherent examination of communications network roles is possible.

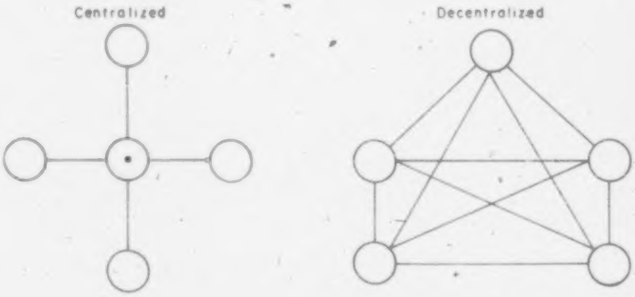


Figure 1
MAJOR COMMUNICATION NETWORKS

Communications Network Roles

Rensis Likert developed the "linking pin" concept and described its functions as maintaining harmony, creating a supportive atmosphere, and having strong motivation to communicate (11). Subsequently, a number of studies in communications research have centered on the liaison role. The liaisons, linking pins, and bridges serve as connectors in the communications networks (see Figure 2). In addition, liaisons may act as integrators of various environments or organizational units and subunits (10).

The concept of integrating roles is not fully developed, but Galbraith (6) offers a basic understanding of this concept. According to Galbraith, the integrator has contacts, establishes trust, and manages decision making. He also states that the integrators need more power as their organizations operate in greater uncertainty or increase the differentiation of task units. In the literature linking pins are assigned positions in the formal communications network, whereas liaisons and integrators are found in either the formal or the informal networks. In some situations positions must be created for integrators (6; 10).

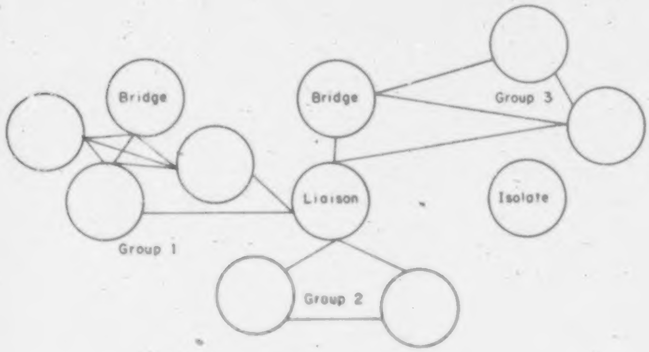


Figure 2
COMMUNICATION NETWORK ROLES

These role theories offer great potential for practicing managers concerned with the flow of information as a means of making their organizations more effective. The integrator/linker role theories suggest that, through properly staffing and positioning the integrator/linkers, communications networks can be made more effective. Attention is now directed to the further understanding of communication roles as a result of organizational communication research.

When networks are mapped, the members of the network are identified as group members. Some individuals are not identified with any group and are consequently not involved in or linked to the communications network. These individuals are called isolates. Bridges and liaisons are the most important roles for providing understanding of communications network effectiveness. Bridges are group members who dominate the communication within their group and serve as links to members of one or more other groups. Liaisons do not qualify for group membership but serve as links to two or more groups. Examination of communications flow indicates distortion is more likely to occur when groups are linked largely by bridges rather than liaisons (4, pp. 186-197).

Guetzkow (7) offers some empirical evidence that "keymen" (liaisons) have high intellectual ability and designate themselves to the key role because of their propensity to self-ascendancy. Schwartz and Jacobson (16) found liaisons to be early knowers and disseminators of information, to be known for their important contacts outside the group, and to act as opinion leaders and gatekeepers influencing formation and change of organizational and job attitudes. In the same study, liaisons were found to be more active in administrative and committee work than non-liaisons.

Roberts and O'Reilly (15) define communication participants as having two or more links with other participants, while non-participants (isolates) are either not connected or only minimally connected to the rest of the network. The results of their 1979 study substantiate the following hypotheses:

Participants are better workers than non-participants.
Participants are more satisfied with their job than non-participants.
Participants are more committed to their organization.
Participants perceive communication with increased information flow, more redundancy, and greater overall satisfaction with communication; they are less likely to withhold information.
Participants have more education.
Participants have more tenure with the organization.

A 1976 report by MacDonald (12) on his study of perceptions of liaisons and non-liaisons of themselves and each other yielded similar results to the 1979 Roberts and O'Reilly study. MacDonald found that liaisons differed by type of network and advised that this may be due to the nature and history of an organization. Some valuable implications of this organizational communication research on networks and roles are discussed in the following section.

Implications for More Effective Management

Through interaction, managers direct the acquisition of information, as well as control and coordinate information dissemination. The primary objective of this interaction is to integrate the efforts of organizational members for the achievement of organizational goals. In small organizations the manager usually knows from daily association to whom to pass information and from whom to get information to achieve desired results. The implication for more effective management in large organizations is that the structuring of communications networks and the selection of key communicators should be considered carefully, because communication is the primary process for achieving cooperation, integration, and coordination.

The coordination function (e.g., key communicators, liaisons, linking pins) is really a specialized process of communication requiring interpersonal skills, cognitive style, intellectual ability, and experience. Coordination is essential to the following goals of organizational leadership:

1. Assembling and integrating the necessary information and specialized knowledge to allow generation of the best possible decisions.
2. Achieving the cooperation needed to successfully implement decisions.
3. Understanding responses to decisions and their implementation such that correct adjustment can be made or the need for a different decision can be properly assessed.

In summary, some of the important implications in organizational communication research for more effective management are:

1. The value of identifying the patterns of information flow (communications networks).
2. The value of identifying the function of each communications network (production, innovation, motivation, maintenance, or integration).

3. The value of identifying all key communicators in each network.
4. The need to select managers willing to identify with and commit to organizational goals.
5. The need to select managers who have a strong inclination to share information and enjoy interacting with others, balanced with a sense of discretion, tact, and discrimination (i.e., become key communicators).
6. The need for managers with abilities in acquiring, organizing, synthesizing, and partitioning information.
7. The obvious need for managers as key communicators to be competent in reading, writing, speaking, and listening skills.

The implications discussed suggest several practices which when applied could improve management effectiveness. These same implications point to the need for further organizational communication research.

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A STRATEGIC AID TO INTERNAL CONTROL— THE ACCOUNTING POLICY MANUAL

*James F. Brown Jr.**

The corporate accountant's basic objective is to provide management with an information system which is adequate to assist in the development of objectives for the organization's functional areas (production, marketing, and finance). Since executives tend to operate within the narrow confines of their own sector of the business, a strategic orientation is necessary for the successful corporate accountant. The corporate accountant must provide an information system which fosters the integration of individual executives into a cohesive team. A strategic or integrated approach to management can only be accomplished if an organization has an information system which is administered with consistency throughout the organization.

The development of an accounting policy manual can assist the organization with the development and maintenance of an information system which fosters a strategic approach to management. This article recommends (1) an appropriate organizational structure for the development of an accounting policy manual, (2) a sequential framework for developing the manual and its contents, (3) a format for the presentation of each policy statement, and (4) a justification for the development of an accounting policy manual.

Organization for Development

How large should the policy group be? Should the group be composed entirely of internal personnel? Should a consultant be employed? What can a consultant contribute? These are questions which must be answered in the planning phase.

As a minimum, the policy development group (see Exhibit 1) should consist of the following three people:

- A project director
- A policy coordinator
- A manual coordinator

A three-person group presumes that a consultant will be employed to assist in writing the accounting policies.

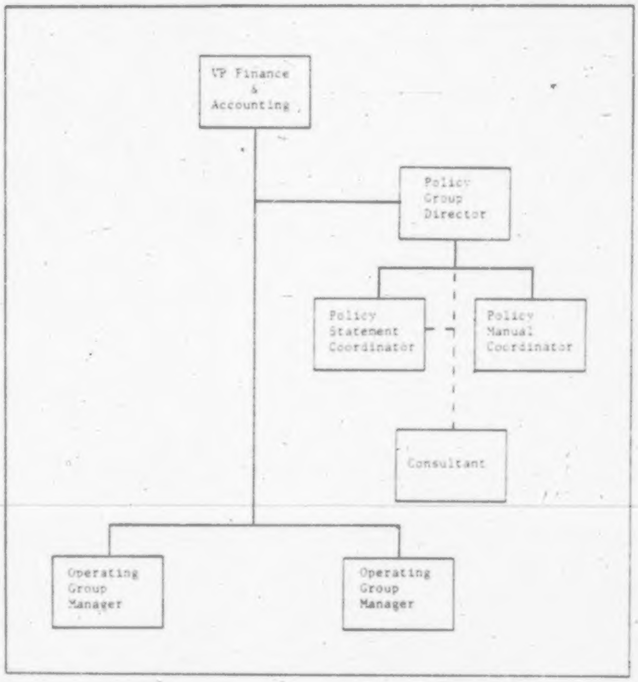

Exhibit 1
ORGANIZATION FOR DEVELOPMENT OF ACCOUNTING POLICY MANUAL

The major decision centers on the selection of an individual as *project director*. This individual must possess the ability to communicate with management personnel at all levels since during the development process the project director will be dealing with top-level management as decisions are made with regard to corporate accounting policy. Later, these policies must be communicated to other managers concerned with the implementation of the policy. The project director must also possess technical competence in the area of financial accounting standards.

The areas requiring a policy statement are determined by the project director in conjunction with top-level financial management and subsequently communicated to the policy coordinator. The policy coordinator is respon-

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sible for the preparation of policy statements. He must interact effectively with the consultant in the preparation of policy statements. The consultant may be a university accounting professor or a member of a professional management development firm which designs manuals for organizations. Regardless of which source of expertise is selected, it is important to maintain control of the product being developed. The policy coordinator should be an individual with specific knowledge of the organization's accounting system. Consultants can prepare technically correct policy statements, but the personalization of these statements can best be done by an individual familiar with the company.

The manual coordinator is responsible for the development of the manual's physical appearance. This would include the manual's binding as well as its organization.

Policy Statement Development Process

The policy statement is developed in a four-step process if a consultant is utilized to assist in writing the statement (see Exhibit 2). Initially, appropriate areas for policy statements are defined. This decision is made by top-level financial management in conjunction with the project director. Next, the policy coordinator interacts with the consultant to define the topics which must be included in each policy statement. Third, the consultant prepares the statement according to GAAP. Lastly, the policy coordinator personalizes the policy statement. If a consultant is not used, the development and personalization of the statement should be accomplished simultaneously since the statement is prepared internally.

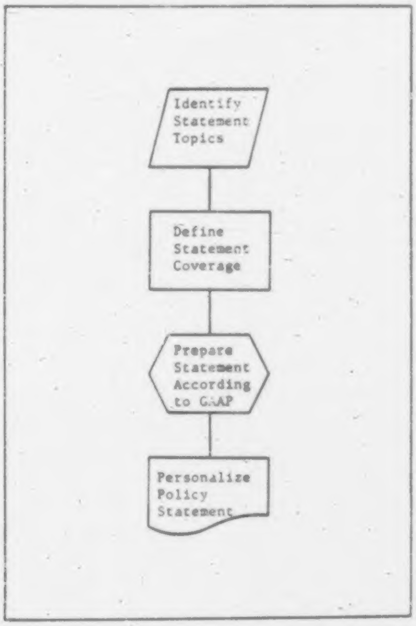
Identify Statement Topics
Define Statement Coverage
Prepare Statement According to GAAP
Personalize Policy Statement

Exhibit 2
POLICY STATEMENT DEVELOPMENT PROCESS

The essence of effective planning is to provide a mechanism for adequate feedback. Likewise, the development of accounting policies requires input from operating managers. Exhibit 3 contains a framework for insuring feedback during the development of accounting policies. First, a draft of the policy is issued to operating managers. Second, after considering the concerns of the operating managers, the policy statement is issued. If routinization of accounting treatments is necessitated as a result of the topic addressed by the policy statement, a separate procedures statement should accompany the policy statement. Lastly, as specific questions arise concerning the area covered by the policy statement, one of three responses will be forwarded to operating managers: (1) an answer to the specific transactional question, (2) a revision in the policy statement, or (3) a procedures statement designed to routinize accounting for the specific transactional area.

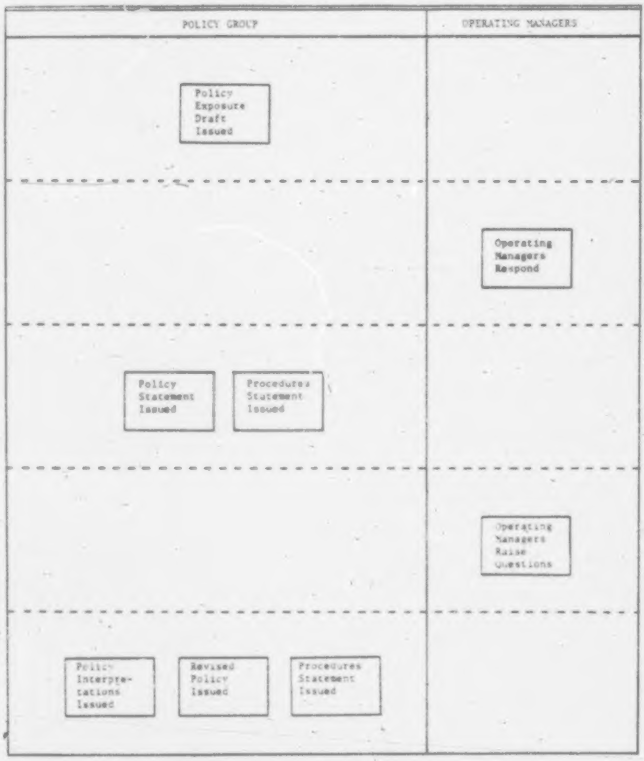
POLICY GROUP
OPERATING MANAGERS
Policy Exposure Draft Issued
Operating Managers Respond
Policy Statement Issued
Procedures Statement Issued
Operating Managers Raise Questions
Policy Interpretations Issued
Revised Policy Issued
Procedures Statement Issued

Exhibit 3
SEQUENTIAL FRAMEWORK FOR DEVELOPING ACCOUNTING POLICIES

An important question which must be addressed during the development of the accounting policy manual concerns appropriate areas for policy statements. The initial areas included in the manual will vary by company, but a suggested list would include the following areas:

- Accounting changes
- Business combination
- Capitalization of interest costs

- Contingencies
- Correction of errors
- Debt
- Income taxes
- Earnings per share
- Intangible assets
- Leases
- Pensions
- Prior period adjustments
- Research and development costs
- Revenue recognition
- Segment reporting

Additional areas should be included in the manual as the company enters new ventures and as time permits for the development of more accounting policies.

Policy Statement Format

The policy statement is intended to serve as a guide for operating personnel. Consequently, the policy statement should be written in a clear, concise, understandable style. The statement format should be divided into five sections (see Exhibit 4):

- Subject
- Background
- Policy
- Effective date
- Pronouncements

SUBJECT	A short descriptive title for the accounting area covered in the policy statement.
BACKGROUND	Definition of the subject including an explanation of technical information essential for understanding the policy statement.
POLICY	The policy statement which is intended to provide guidance in accounting for the subject under consideration.
EFFECTIVE DATE	Date the statement becomes binding on the organization.
PRONOUNCEMENTS	Listing of APB Opinions and FASB Statements which support the position taken in the policy statement.

Exhibit 4
ORGANIZATION OF A POLICY STATEMENT

The subject section contains a concise description of the topic covered in the policy statement. The background section contains technical definitions which are necessary to understand the policy. The policy section presents the statement of policy. This statement should provide guidance to operating managers without undue specificity. Frequently, policies will cover several topics in one statement. For example, a policy on debt may include areas such as: (1) the classification of short-term obligations, (2) disclosure of long-term obligations, (3) extinguishment of debt, and (4) troubled debt restructuring. When this situation occurs, the use of subheadings is strongly encouraged as an aid to clarity. The effective date when the statement becomes binding on operating personnel should also be indicated. The last section should indicate the APB opinions and FASB statements which support the position taken in the statement. This provides managers with a means for referencing the technical pronouncements which could assist them in applying the policy statement to specific transactions.

Again, the objective of a policy statement is to outline the course to be followed. Initiative and judgment by the manager in interpreting the policy should not be prohibited by the statement. Clarity, conciseness, and readability are paramount considerations if an effective statement is to be the result.

Justification of the Manual

Time and company resources are required when an accounting policy manual is developed. Consequently, there must be a justification for the use of these resources. The major benefit of an accounting policy manual is in the area of internal control. Since operating managers have a guide in their decision processes, the result should be greater consistency in accounting for similar transactions.

Since the policy statements indicate the interpretations of senior-level financial managers in complex accounting areas, these statements can serve as training manuals to guide employees in their development process. Employees have an opportunity to digest the decisions of senior-level managers with regard to complex areas of the accounting environment. Additionally, the time required to keep abreast of current pronouncements is reduced via the accounting policy manual.

Channels of communication are also improved since operating personnel have a defined route for seeking and receiving answers to difficult accounting questions. Written responses disseminated by the policy group serve as guides to all personnel with similar questions.

Word of Encouragement

The development of an effective accounting policy manual is not a terminal task! As new pronouncements are issued or business directions change, the manual must be revised and updated. The task is continual, but so are the rewards. Strong internal controls insure an information system which can assist management in all organizational areas to visualize and accomplish vital organizational objectives. The result is an organization which continues, develops, and leads.

A SYSTEM OF CONTROLS AGAINST TERRORISM: WHAT ARE THE NEEDED ELEMENTS?

*Michael A. Pearson, John K. Ryans, Jr., and William L. Shanklin**

Nothing strikes fear in the heart of corporate America more than an act of terrorism—an unprovoked, seemingly random act of violence that may take such forms as kidnapping, bombing, or assassination. Yet more and more, the threat of terrorism is becoming a reality around the world. Since multinational corporations (MNCs) have frequently been the object of terrorist activities, company executives attempting to operate in the best interests of their shareholders and employees cannot ignore this danger. This is particularly true since businesses are increasingly being considered "soft targets" by terrorists in that most firms have limited experience with violence.

A review of current events finds, among others, the following political and economic terrorist attacks and related occurrences:

- The president of American University in Beruit was assassinated in January 1984.
- Alfred Heineken, president of the famous Dutch brewery, and his chauffeur, kidnapped in November 1983 in Amsterdam, were found alive but chained in concrete cells three weeks after the kidnapping.
- 239 American military men were killed by the act of a single terrorist in a suicide truck-bombing in Lebanon on October 23, 1983.
- An Italian industrialist's socially-prominent wife and son—the latter minus one ear—were released after the payment of a significant ransom.
- Terrorist bombings have occurred in the Capitol Building, and other bombing incidents have taken place in New York.
- The White House is secured against "truck bombings," and ground-to-air missiles were deployed to prevent "suicide air attacks" on the President during the 1983 Christmas season.
- More than $200 million per year is now being spent to protect U.S. diplomats in the wake of embassy attacks and threats of attack.

During the past decade, the list of U.S. expatriates who have been kidnapped and/or killed by terrorists is staggering. Companies such as Dana Corporation, Goodyear International, Exxon, American Express, Texaco, Rockwell International, and Gould have all had executives kidnapped, some of whom have even been killed. Among overseas companies, of course, the number is even more dismaying. It has been suggested that virtually *every* prominent Italian industrialist has been kidnapped "at least once."

Recent terrorist activities have prompted many U.S. companies to take a close look at the preventive measures needed to guard against terrorist attacks and to consider kidnap/terrorist insurance. Other companies, of course, have long since taken these kinds of control actions for their foreign and domestic human resources and plants, but current events are causing these companies to reevaluate whether they are sufficiently secure.

Political Versus Economic Attacks

While seemingly it would make little difference to the victim, the kidnappings, plant destruction threats, etc., may be either economically or politically motivated (or both). When it comes to executive kidnapping, the perpetrators are usually "in the game" for the ransom, albeit the monies often are used to advance radical political causes. The terrorists are typically professional criminals and their actions are rather predictable (i.e., you pay the ransom and they release the hostage relatively unharmed). A similar type of professional criminal may be the terrorist who threatens to destroy a plant, damage a pipeline, etc., unless a fixed amount is paid. If these individuals are in the business of coercion for profit, then it is in their long-term best interests to play the game according to the rules they establish.

The problems seem to increase dramatically when terrorists are politically or religiously inspired. Americans found it very difficult in World War II to understand Japanese kamikaze pilots and now have similar problems in dealing with the types of extremist factions who willingly drive a truckload of explosives into a military compound and kill scores of people as well as themselves.

**Associate Professor of Accounting, Professor of Marketing and International Business, and Professor of Marketing, Kent State University, Kent, Ohio.*

An interesting comment on this subject is attributed to Brian M. Jenkins, a Rand Corporation analyst and terrorism researcher. Mr. Jenkins said, "Americans tend to underestimate the power of religious commitment and turn to psychiatrists for explanations of abhorrent behavior."[1] He also adds that this bewilderment or lack of understanding on the part of Americans ". . . is as much a reflection of our society as that of the extremist Shiite."

Mr. Jenkins' point is a significant one. If Americans (and American businesses) disregard the dangers from concerted actions by terrorist groups, viewing them instead as random actions by psychotics, then appropriate steps to counter efforts by political extremists will not be taken.

Of course, not all politically-motivated terrorists are interested in personnel destruction. Some of these terrorists engage in kidnappings or property threats to add much needed funds to a revolutionary group's coffers. A $1.0 million ransom received from a company for the release of a kidnapped executive can purchase a significant amount of small arms, for example. Regardless of the type of political or religious extremist/terrorist, however, the prevailing view is that this individual is much less predictable than his or her purely criminal counterpart.

Seeking Advice on Controlling Terrorism

Because of the growing number of terrorist acts around the world, MNCs are finding it increasingly necessary to take actions to protect their personnel, investments, and other assets at foreign locations. These actions may take a variety of forms, ranging from establishing crisis-management teams to hiring security specialists.

Just how significant is terrorism considered by international corporate executives? A 1980 study of MNC executives found that, outside of inflation, terrorism was felt to be the MNC's number one problem.[2] Additionally, MNC executives expressed frustration and feelings of inadequacy in dealing with terrorism. The typical route to top management positions offers limited exposure to gaining expertise in dealing with this problem.

Because of their irrational nature, terrorist acts are difficult to contain and control. To whom can management turn for advice and assistance? Unfortunately, there are few true "experts" in this area. However, there are a number of individuals who are proficient in general control system design, and the authors went to some of them for assistance in developing a system of controls against terrorism.

Both external and internal MNC auditors deal with various controls on a day-to-day basis. External auditors (i.e., CPAs) study and evaluate accounting controls routinely as part of each annual audit engagement. They do so to insure that client assets are safeguarded and that the accounting system is producing reliable information. Internal auditors are concerned with administrative as well as accounting controls. It is the internal auditor's responsibility to review the controls that are in place to assure effective and efficient business operations. On the basis of their routine duties then, many auditors could be viewed as veterans in control development, implementation, and evaluation.

Although designing controls specific to terrorism may be somewhat removed from both external and internal auditors' typical activities, it was felt that these auditors might be able to shed some light on what controls are most important for an MNC. Mail questionnaires were, therefore, sent to external auditors at some of the international CPA firms and internal auditors at some of the *Fortune* 500 companies. Seventy-six external auditors and 81 internal auditors agreed to anonymously share their views on terrorism control.

The questionnaire respondents clearly recognized terrorism as a significant concern. For example, when asked to evaluate a list of potential MNC problem areas, both the external and the internal auditors ranked terrorism very high in terms of being a greater problem today than it was ten years ago. It seems reasonable to conclude, therefore, that auditors would now encourage MNCs to take more intensive actions to control this problem.

A System of Controls Recommended by Auditors

The perceptions of the external auditors were remarkably similar to the views of the internal auditors on the subject of counteracting terrorism. The controls that both groups recommended most strongly were *contingency plans, data base recovery systems,* and *employee training and orientation programs.*

The auditors were very much in agreement that MNCs should have explicit written contingency plans for responding to terrorist threats and activities. Without such plans, reactions to terrorists will possibly be haphazard and different than they would have been had they not been made under duress. To insure that plans can be made operational, the external and internal auditors recommended that the plans be tested periodically.

Data base recovery systems are necessary to shield against possible data loss caused by terrorist acts. Companies need to have the capability of easily reconstructing economic, financial, and other data should terrorists tamper with or destroy stored company information. Vital records, in particular, need to be identified and protected. Additionally, procedures relating to the handling of sensitive information are needed to guard against unauthorized use.

Lastly, the external and internal auditors believed the assignment of an employee to a high-risk area requires more training and orientation than does a similar assignment in a lower risk area. They felt training/orientation sessions are necessary to alert employees to all potential problems and to develop a keen sense of security awareness. After initial training and orientation, periodic security briefings should take place to assure that personnel in high-risk areas are kept up-to-date on terrorism control matters and cognizant of management's strong commitment to security. And, as new employees are assigned or hired in high-risk areas, extensive background checking is a must.

More on Contingency Planning

It is impossible to preclude terrorist acts totally. Any terrorist who is willing to sacrifice his or her life in a kamikaze-type action against a target has some chance of succeeding. In less destructive forms of terrorism, mainly kidnapping without ultimate loss of life, it is still infeasible to protect every employee who might be vulnerable. Even a large corporation does not have the economic resources that would be needed. And the fact is, business simply cannot be conducted well under siege conditions.

Nonetheless, prudent MNC executives do not use these limitations as excuses for not preparing their firms for the all-too-real potential of terrorism. They engage in well-thought-out contingency planning, recognizing full well that the plans are not and cannot be foolproof. Indeed, the point can be argued persuasively that MNC executives' fiduciary and humanistic responsibilities absolutely mandate careful contingency planning against terrorist acts.

Any good contingency plan requires that close attention be paid to three key components. These are: intelligence gathering, security precautions, and crisis preparation.

"Intelligence gathering" concerning various countries or regions in which an MNC has an actual or contemplated presence is essential if appropriate security decisions are to be forthcoming. And this is a continual process, since environmental conditions can be fluid.

Naturally, corporate operations in some countries require little or no extraordinary security steps, whereas operations in other countries necessitate that extensive measures be pursued. Once data about a country are acquired, a company might decide, for example, to enter the market for the first time, or to divest existing operations, or to stay there but enhance security. Without adequate information, these kinds of decisions cannot be made with any degree of confidence.

Much of the intelligence-gathering chore can often be achieved within the company by talking with knowledgeable employees. For instance, an MNC might have executives who, through experience, are versed in the historical and current political environment of a given country or region. Of course, it is also often necessary to acquire expertise outside the company, especially if a country is in a state of political flux. A number of reputable firms and individuals are in the business of political risk analysis. However, the MNC usually needs to check references closely, as many unknown firms and individuals now offer themselves as political risk experts. Being unknown does not indicate incompetence, but it does mean that the MNC needs to be extremely careful in ascertaining the political risk analyst's purported qualifications.

"Security precautions" is a second vital component of a contingency plan. In fact, insurers like Lloyd's of London who provide kidnap/ransom and property/casualty insurance to MNCs most always do so with the expectation and stipulation that the MNCs take certain precautions—notably, retaining security experts and installing protective equipment. Anti-terrorist security is a rapidly growing business, as MNCs rely more on executive-protection and security firms like Pinkerton, Burns International, and Wackenhut to assist them in the important job of protecting employees and material assets.

A third integral aspect of preparedness planning is the development of a crisis plan specifying who with the MNC is going to do what in the event of threatened or actual kidnappings, bombings, or other terrorist acts. The plan entails the establishment of a crisis management team to deal with the menace or reality of terrorist atrocities. The team is charged with the responsibility—and given the authority—to make decisions on crucial matters that may arise in the event of a terrorist strike. Most notably the team must decide whether, how, and when to negotiate in cases of possible or actual terrorist actions against the MNC and must formulate policy on ransom payments and extraordinary security precautions. For instance, as policy the MNC may decide always to negotiate in kidnappings but never in terrorist moves against inanimate assets, unless there is the chance of loss of human life.

Conclusion

The MNC is faced with a number of significant problems, not the least of which is terrorism. Events of the past decade have shown us that terrorist activity is on the rise, and the MNC is often the target of antagonistic attacks.

It is unrealistic to expect terrorism to cease completely. But the MNC can certainly take actions to mitigate the risk of business or employee loss due to terrorist interference. In this article the views of a number of auditors (both external and internal) regarding a system of controls to combat terrorism have been reported. Using their knowledge of control systems in general, these auditors have suggested some components for a system of terrorism controls. The system described is not all encompassing, but it does lay the foundation for further development.

The primary ingredients of such a system are contingency plans, data base recovery programs, and appropriate employee training and orientation. MNCs that develop and implement these controls, the auditors assert, are less likely to fall prey to terrorists. And if actually attacked, these MNCs will be able to cope well with the situation.

Contingency planning has been discussed in detail in this article, as it is believed to be the most important element of a terrorism control system. Contingency planning involves constantly obtaining intelligence materials, establishing various security precautions, and adequately preparing for possible crises.

In closing it should be noted that currently there are very few auditors who are experts, or even quasi-experts, in controlling terrorism. Auditors' knowledge of control systems in general, however, can certainly be of assistance to MNCs that are developing controls to counteract terrorist acts or evaluating controls already in place. At a minimum, auditors have the professional obligation to confirm that the MNC has taken ostensibly reasonable steps to protect human and material assets from terrorist forays. For example, has the MNC established a crisis management team? Has the company hired or retained individuals with security expertise? Both external and internal auditors should be held responsible for making these kinds of inquiries and following up on responses.

FOOTNOTES

[1] Richard D. Lyons, "Who Are These Smiling Killers?" *The New York Times*, December 18, 1983, p. 1E.

[2] John K. Ryans, Jr. and William L. Shanklin, "How Managers Cope With Terrorism," *California Management Review*, Vol. XXIII, Winter 1980, pp. 66-72.

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The Mid-South Data Bank is an informative data base that consists of over 700 time series focusing on Memphis and the Mid-South economy. The data base is a compilation of retail sales, construction activity, employment ratios, earnings, consumers' and producers' price indices, finance, and other economic variables found useful by data users in industry, government, and research. The series are maintained on a weekly, monthly, quarterly, and/or annual basis and are documented with descriptions and sources.

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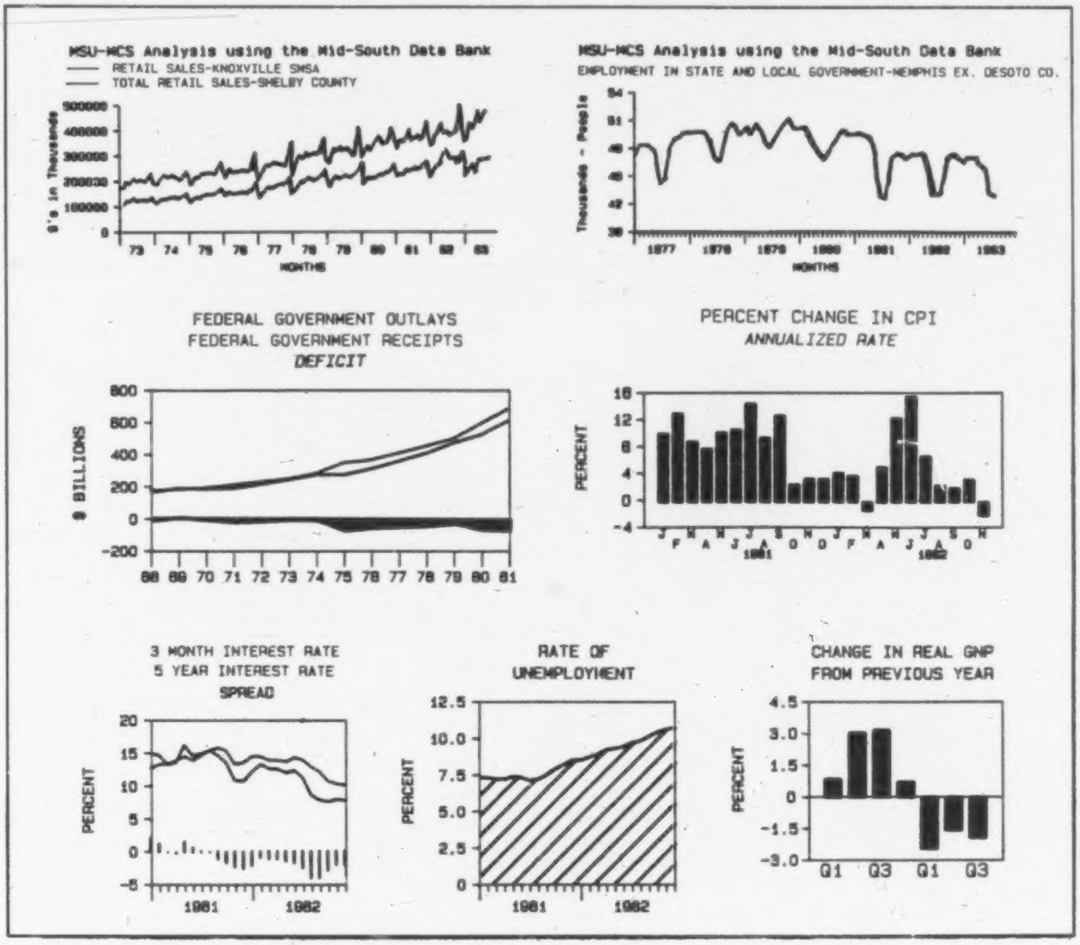

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- 6/17/85 U3040-1

1st Quarter 1985

Bureau of Business & Economic Research
The Fogelman College of Business and Economics
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MID-SOUTH BUSINESS JOURNAL

Volume V, Number 2 April 1985

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THIS PUBLICATION IS MADE POSSIBLE
IN PART BY A FINANCIAL GRANT FROM

THE NATIONAL BANK OF COMMERCE
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The MID-SOUTH BUSINESS JOURNAL is published quarterly by the Bureau of Business and Economic Research, Memphis State University, Memphis, Tennessee 38152, in the months of January, April, July, and October, as a service to the business community. Second-class postage paid at Memphis, Tennessee. POSTMASTER: Send address changes to Bureau of Business and Economic Research, Memphis State University, Memphis, Tennessee 38152.

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BUSINESS ASPECTS OF THE MID-SOUTH FOREST ECONOMY

*Steven H. Bullard and Thomas J. Straka**

Introduction

Timber resources and related economic activity are substantial in the Mid-South states of Tennessee, Alabama, Mississippi, Louisiana, and Arkansas. Most of us are aware that timber is an important aspect of our regional economy. We observe many stands of timber and often see it being harvested and transported to shipping points and manufacturing facilities. Many, however, do not fully appreciate the absolute size of the Mid-South's forest resources, nor their relative importance to states within the region. The Mid-South forest economy is described in two sections: (1) forest resources in general and (2) timber manufacturing or processing. Value added and employment and wages for Mid-South forest industries are considered in the analysis. These aspects of the forest products industry allow us to compare states within the region, to characterize the Mid-South's position in the national forest economy, and to show the importance of forestry to Mid-South businessmen.

Forest Resources of the Mid-South

The Mid-South is heavily forested. Woodlands occupy over one-half of the area of each state in the region, ranging from just over 50.0 percent of Tennessee to 66.0 percent of Alabama. On average, forests cover 56.0 percent of the region's land area.

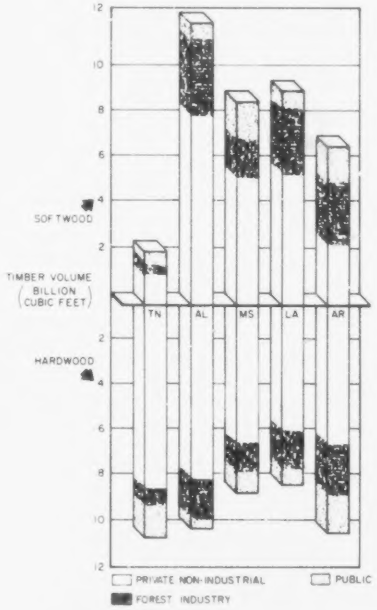
The type of forests in each Mid-South state varies. Forests are commonly divided into two major timber groups: softwoods (various pines and evergreen trees) and hardwoods (broadleaved trees like oak and gum). Hardwoods dominate the region's timberland, occupying 64.0 percent of the forested acreage. On the basis of timber volume, hardwoods comprise 59.0 percent of the region's total.

Longleaf and slash pine forests dominate the Mid-South's lower coastal plain. Loblolly and shortleaf pine extend northward to Tennessee and the lower two-thirds of Arkansas. Upland hardwoods are common in the region, especially in Tennessee and northern Arkansas. Bottomland hardwoods are generally found along rivers and streams and, of course, the areas bordering the Mississippi River contain particularly large volumes of bottomland hardwood.

The Mid-South contains about 42.0 percent of the South's standing timber. Each state in the region has a significant part of the Mid-South's timber inventory and growth. Specifically, Alabama produces about 25.0 percent of the region's volume; Tennessee, 15.0 percent; and the remaining three states about 20.0 percent each. Alabama, Mississippi, and Louisiana each have about one-half softwood and one-half hardwood. Arkansas' timber is about 64.0 percent hardwood and Tennessee's about 84.0 percent hardwood (Figure 1).

Figure 1

TIMBER VOLUME FOR FIVE MID-SOUTH STATES, BY SPECIES GROUP AND OWNERSHIP CATEGORY



**The authors are Assistant Professors of Forest Economics, Mississippi State University, Mississippi State, Mississippi. Manuscript #6096 of the Mississippi Agricultural and Forestry Experiment Station.*

Harvest levels for the region generally parallel the standing timber inventory. The Mid-South, for example, accounts for one-half the South's sawtimber harvest. Tennessee produced only 6.0 percent of the region's sawtimber output, while each of the remaining four states produced between 20.0 and 25.0 percent. About 84.0 percent of Tennessee's sawtimber harvest was hardwood, while the average for the Mid-South is only about 30.0 percent.

Who controls the Mid-South's vast and valuable timber resources? Approximately 70.0 percent of the region's forest land is controlled by private non-industrial landowners, 20.0 percent by the forest industry, and 10.0 percent by public agencies (Figure 1). Except for Arkansas and Tennessee, the individual states follow regional averages. Tennessee, for example, has about 80.0 percent private non-industrial forest land and about 10.0 percent forest industry land. In Arkansas, however, only 62.0 percent of forest lands are private non-industrial, while about 16.0 percent are publicly owned. The forest ownership pattern in the Mid-South is typical of the eastern United States.

Non-industrial private owners are expected to continue to be the major supplier of timber in the Mid-South. Although the ownership objectives of this diverse group of forest landowners do not always include timber production, long-term timber supply in the region greatly depends on their present actions. This helps explain state and federal government assistance for non-industrial private landowners in replanting or reseeding harvested forest land. A federal incentives program applies to all non-industrial forests in the U.S., while within the region Mississippi has a state-operated assistance program. Such programs recognize the importance of maintaining and developing our commercially productive forest resources.

Timber Processing Industries

Timber processing industries can be divided into three broad groups: lumber and wood products; wood furniture and fixtures; and pulp, paper, and allied products. Important aspects of these industry groups in the Mid-South during the late 1970s are summarized. Original data were largely complied by the Forest Industries Committee on Timber Valuation and Taxation, as reported by the American Forest Institute [1]. Other sources of Mid-South forestry data are also listed in the references.

Regional Value Added

Value added is a very useful measure of the economic contribution of an industry to a region. It reflects the increased value of inputs attributed to particular stages of production and thereby measures the total income created by an industry in a region.

Lumber and wood products; wood furniture and fixtures; and pulp, paper, and allied products industries in the Mid-South annually account for $6.5 billion in value added. Total value added for these industries in the Mid-South is greater than that of 11 New England and Mid-Atlantic states combined. Half of the value added in timber processing in the Mid-South is provided by the paper and allied products industry group. Income created by timber processing varies a great deal, however, between industries and between the five states in the Mid-South region.

Value Added by States

Leading states in the lumber and wood products industries are Alabama, Mississippi, and Arkansas, each with over one-half billion dollars in value added. The income created through lumber and wood products industries in these states reflects high volumes and values for softwood lumber and veneer products and high quality lumber and veneer from southern bottomland hardwoods. The upland hardwood forests common to Arkansas, Tennessee, and northern Alabama and Mississippi are not used for highly valuable lumber and wood products, but contribute significantly to the Mid-South's economy through the furniture and fixtures industries.

In furniture and fixtures, Tennessee dominates the Mid-South's value added with over $400 million. Between-state variation is great for value added in this industry group, however. While Tennessee had over $400 million in a particular year, for example, Louisiana had less than $20 million in income created through wood furniture and fixtures. This industry group largely relies on hardwood raw materials, and Tennessee has more hardwood raw material than any other Mid-South state (Figure 1). Hardwood furniture and flooring industries are particularly prominent in Tennessee. These industries use both old and new technologies to produce relatively valuable furniture and flooring from the state's abundant hardwoods. All stages of manufacture, from raw material to finished product, are therefore often provided within the state, capturing all of the income created in certain areas of the furniture and fixtures industry group.

For pulp, paper, and allied products, value added in the Mid-South is over $3.0 billion. Alabama, Louisiana, and Tennessee account for over 75.0 percent of the income created by this group in the region. In general, pulp and paper industries are located close to their raw material sources, in areas with abundant water and power supplies, and close to the major markets for pulp and paper products in the eastern U.S. The Mid-South therefore has distinct advantages over other regions of the U.S. for pulp and paper facilities. Small, pulpwood-sized timber abounds; water, labor, and electricity are relatively plentiful; and transportation and shipping to eastern cities is relatively inexpensive. The relative importance of Tennessee is an interesting aspect of the Mid-South's pulp and paper industry. Seventy-five percent of the Mid-South's pulping capacity relies on softwoods, and Tennessee does not have significant softwood resources. Most softwood pulpwood used in Tennessee is therefore shipped from northern Mississippi and Alabama, demonstrating the importance of raw materials shipments in the region's interrelated forest economy.

Employment and Wages

Recent figures show a civilian labor force of about 8.0 million people in the Mid-South [10]. Of this group of potential employees, over 200,000 work for forest industries. Forestry employment ranges from 30,000 people in Louisiana to near 60,000 in Tennessee.

Across industries, forestry employers pay over $2.5 billion to their workers in the Mid-South each year. Alabama and Tennessee have the highest annual payrolls at about $600 million each. The other three states each have over $400 million in forest industry wages. Paper and allied products industries have the greatest payroll in Tennessee, Alabama, and Louisiana, while in Mississippi and Arkansas the lumber and wood products industries are greatest. Wage differences between industry groups are apparent from income and employment in recent years. In Tennessee, for example, 23,100 workers earned $209.6 million in wood-based furniture and fixtures industries, or an average salary of $9,074. At the same time, 16,500 people earned $241.2 million in the paper and allied products industries in Tennessee, an average salary of $14,618.

Discussion and Outlook

Forests occupy over half the land in the Mid-South, and timber-related processing accounts for $6.5 billion in value added by manufacture each year. Over 200,000 people earn $2.5 billion annually from forest industry jobs, and when added to the number of people who could derive income from selling timber on their lands, over 1.0 million people in the Mid-South are directly affected by forestry. The Mid-South's forests are vitally important to the region's economy and are likely to become even more important.

The USDA Forest Service has made detailed projections of the nation's forest economy to the year 2030 [19]. The demand for most timber products is projected to rise rapidly for the remainder of the century. Demand is actually expected to double over the next 50 years. Net imports of timber products should increase, but the major portion of this increased demand must be satisfied from domestic forests.

The projected demands for timber products are rising much faster than projected timber supplies. The result, according to the USDA Forest Service analysis, will be rising relative prices of timber products and "a growing economic scarcity of a basic raw material" [19]. However, tremendous opportunities exist to increase and extend timber supplies. These opportunities would require society to make a substantial investment in forest capital.

The USDA Forest Service has identified 168 million acres nationally that have a potential for increased timber production. These economic opportunities include regenerating non-stocked areas, harvesting and regenerating mature stands, and converting current forest stands to more productive tree species. All these investments are estimated to yield a real rate of return over 4.0 percent.

The South Central region (defined by the Forest Service as the Mid-South, southeastern Oklahoma, and east Texas) has 38.0 percent of these economic opportunities. The South Central region has the largest number of economic opportunities in the nation, whether measured in acres or in potential timber supply increases. The real rates of return that can be expected from forest investment exceed 10.0 percent in most cases, the highest nationally, and over 70.0 percent of the opportunities are on non-industrial private forest land. The Mid-South has the greatest potential for increased timber supply in the nation and, if national economic scarcity of timber is to be avoided, substantial forest investment is necessary in the region.

In the Mid-South only Tennessee currently has sufficient timber reserves to continue to attract new forest industry into the 21st century. The remaining states certainly will not run out of timber, but if increasing national timber products demand is to be filled in the Mid-South, more investment is needed in forestry. The region is often referred to as a "wood basket" and, with investment in its forest capital, the Mid-South can continue to attract forest industry.

The importance of the Mid-South to the nation's timber production is well-recognized. For example, in 1979 the federal government spent $14.5 million in a single national program to assist private landowners in timber production (the Forestry Incentives Program). Nearly one-third of the program's incentives were invested in the Mid-South. Mississippi considers forestry investment important enough to offer state incentives in addition to the federal program (the Forest Resource Development Program).

The availability of adequate timber supplies, when combined with a favorable business climate towards the forest products industry, makes future expansion of the Mid-South's timber-processing industry a certainty. The economic importance and growth of the forest industry in the Mid-South will continue to be great. Analysts, planners, and businessmen should be aware of the relative prominence of forestry and forest industries, recognizing their important role in the present and future development of our regional economy.

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THE PSYCHOLOGICAL RELATIONSHIP BETWEEN SELF-IMAGE, PRODUCT IMAGE, AND STORE IMAGE WITH REGARD TO RETAILING

Robert E. Hite and Joseph A. Bellizzi

Introduction

Research involving consumers' images of products and firms has been prevalent in the field of marketing during the 1960s and 1970s; however, many questions and problems remain regarding the development and operational value of imagery in retailing. This is due in part to the recent lack of additional theoretical development, which in the past has served to deepen understanding and stimulate research activities. The purpose of this article is to provide a theoretical model that will aid in operationalizing the concept of imagery as it applies to the marketing of goods and services at the retail level and to introduce the concept of "image equilibrium" in retailing. The following sections provide a research basis for the model which follows.

The Importance of Imagery

The role of imagery in economic activities was discussed by Boulding (1956), who theorized that the behavior of a human is not directed by mere knowledge and information, but is a product of the images that one perceives. He maintained that an individual will function or react not in response to what is true, but to what is believed or perceived to be true. Thus, to mediate between ourselves and the world around us, humans use subjective values and perceptions which are further limited by our rationality. The limitations exist because the human mind is "bounded" by a limited capacity to handle only a certain number of complex situations and stimuli. March and Simon (1959) have provided a comprehensive study of bounded rationality and maintain that except in the case of certainty, humans do not have knowledge of all the alternatives and consequences involved in a decision-making process. Even if all the alternatives were known, a timely decision could not be made because of a limited capacity to comprehend or rate the consequences. Humans attempt to handle this dilemma by capturing the main ideas or features of the problem and ignore the multitude of complexities. This oversimplification often takes the form of combining all the traits of a nation, for example, into a simple cartoon character such as "Uncle Sam." By personalizing these symbols or objects, we allow ourselves an avenue for interaction with them (Lindquist, 1975). Thus, humans may either like or dislike institutions in a manner similar to liking or disliking a person. Retailers are by nature very much affected by social activities concerning the act of consumption; thus, it becomes critical to be viewed by consumers "in a favorable light." Sethi (1979) pointed out that an increasingly important element of corporate external communication effort is corporate institutional, goodwill, or image advertising.

The Meaning of Store Image

Store image is defined as the "personality" the store presents to the public, or a complex of meanings and relationships serving to characterize the store for people (Arons, 1967). Martineau (1969) offered the following description of store image: "It is . . . the way in which the store is defined in the shopper's mind, partly by its functional qualities and partly by an aura of psychological attributes." The "functional qualities" are merchandise selection, price ranges, credit policies, store layout, and other such qualities that can be more or less objectively compared with those of a competitor. The "psychological attributes" are such things as a sense of belonging, the feeling of warmth or friendliness, or possibly a feeling of excitement or interest. Thus, the definition maintains that consumers form a store image on both a functional plane and on a psychological or emotional plane simultaneously.

Kunkel and Berry (1968) defined image as "discriminative stimuli for an action's expected reinforcement. Specifically, retail store image is the total conceptualized or expected reinforcement that a person associates with shopping at a particular store . . . an image is acquired

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through experience and is thus learned." Oxenfeldt (1975) felt that the image of a store is more than a factual description of its many characteristics. He likened a store image to a highly interpretive portrait rather than a photograph. While the definitions are varied, all of the authors stressed that store image is complex by nature and consists of a combination of tangible or functional factors and intangible or psychological factors that a consumer perceives to be present. Therefore, store image is the stimili, from a combination of objective and emotional material, which produces the total personality that an individual associates with a particular retail outlet for expected reinforcement.

The Meaning of Self-image

The self is what one is aware of, one's attitudes, feelings, perceptions, and evaluations of oneself as an object (Hall & Lindsay, 1957). The self represents a totality which becomes a principal value around which life revolves, something to safeguard, and if possible, to be made still more valuable (Newcomb, 1956).

An extensive review of the literature regarding self-concept was done by Wylie (1961). Psychologists have been especially interested in studying differences in perception of two important self-concepts: the real self and ideal self. The real self is defined as an individual's perception of how he or she actually (really) is, and the ideal self is that perception of how he or she would like to be. Both Birdwell (1965) and Grubb (1967) used the real self-concept to test for congruency with product images, though it does not seem to be known which one is of greater importance regarding purchase behavior. It is felt that some purchases are influenced more by the real self and others are regulated by the ideal self. One could hypothesize that socially-consumed products are associated more with ideal self-image congruence and that privately-consumed products are associated with real self-image congruence, although Dolich (1969) found little support for such a relationship.

Product images are not found independently. In addition, product images and self-images have positive and negative values. Self-consistency theory suggests that consumers purchase products which are consistent with their self-image regardless of whether their self-image is positive or negative. More recently, Sirgy (1982) argued from a self-esteem perspective that when self-images are negative, consumers may purchase products with a more positive image as a means of avoiding self-abasement. However, when self-images are positive, resultant purchases are also positive and can be explained by self-consistency theory.

Research findings suggest that people tend to perceive others whom they like as being more similar to themselves than those whom they dislike (Fielder, Blaisdell, & Warrington, 1952). Similarly, people tend to like others who they perceive as being more similar to themselves than those who are less similar (Fielder et al., 1952). Transferring these findings to the context of buyer behavior, people prefer products which they perceive as being consumed by a person who is "similar" to themselves.

The Congruence of Self-Image and Product Image

Products often serve as symbols which an individual can utilize as symbolic meanings to protect or enhance his own self-image. Thus, a buyer will organize his consumption practices in a manner which he perceives as congruent with his own self-concept. Dolich (1969) provided the main points in developing psychological involvement: (1) the individual's perception of the product as symbolic, and (2) the existence of a self-concept to which the individual relates the product symbol.

Rogers (1965) proposed that an individual behavior was regulated by each person's perceived similarities (or dissimilarities) of environmental conditions to the self-image. Products and brands are part of the environment symbolized by consumers. Thus, by determining the self-image characteristics of a desired target market, a firm may discover salient dimensions which have important strategic implications in such areas as advertising appeals and campaigns, store displays, sales promotions, store atmosphere, merchandise, and physical layout.

Some products, brands, and stores have long been recognized as having psychic values to certain market segments. The linking of psychological values of an individual's self-image with the symbolic value of goods purchased sheds light on consumer behavior within the marketplace. For example, Birdwell (1965) predicted that "an automobile owner's perception of his car is essentially congruent with his perception of himself," and concluded that "automobiles are often extensions of the owner's image of self." Accordingly, those products or brands symbolized as similar to the self-concept will maintain or enhance the self. Thus, a retailer should provide a product offering that will be most congruent with the self-concept and psychographic (life-style) dimensions found within a desired target market. Dolich (1969) further supported the concept of product-image/self-image congruency; however, more recently Martin and Bellizzi (1983) have offered evidence that purchases may indeed be made that do not result in congruency between product images and self-image. While Dolich (1969) reported self-images closer to product images of most preferred brands than least preferred brands, Martin and Bellizzi (1983) suggest that other variables may be involved in the purchase process and that self-image congruency is operating on a secondary level.

The Congruence of Self-image and Store Image

Martineau (1969) was one of the first to suggest that a consumer selects stores which have a personality consistent with the consumer's image of himself. The image one has of the self may not necessarily be accurate in terms of how he or she is seen by others. An individual's self-image serves certain needs, however; and one acts to protect and enhance this image. Since the act of purchase is a public transaction, and the product will often bear the label of the store, there is an interaction between an individual's self-concept and one's perceived image of the store. As a consumer patronizes a particular retail establishment, he or she may become consistently aware of these feelings (or response to the interaction) depending upon the perceived importance of the purchase. The importance of a purchase is determined by the amount of dollars expended, the length of time an individual must use the product, the level of status implications attached to the product, and whether the product is conspicuously consumed. This will affect such things as length of stay, products selected at a particular store, whether the store intimidates or seems "beneath" the consumer, and whether one will mention the transaction to others (which serves as "additional commitment" to the transaction). Store image studies provide an understanding of why consumers will purchase certain products at one store and reject those same offerings at another outlet.

Operationalizing Retail Imagery

Few people have little or no impression of particular retail outlets and therefore absolutely no feeling about them. Almost all customers have impressions about the characteristics of stores, including some with whom they have never dealt. An image of Lord and Taylor or Neiman Marcus is perceived by many who have never stopped in these stores. People who have never had experience with a retailer or a service often rely on "word of mouth" impressions from friends or others with whom they can identify. Promotional campaigns often serve to fill information gaps; thus, a significant image can develop without any first-hand exposure to a retailer or a product offering.

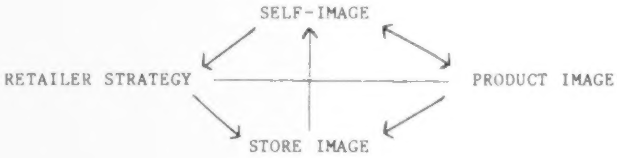
The advantages of developing the most favorable image possible are evident. A major objective of a retailer often is to increase market share, thereby generating additional sales. In order to enjoy a permanent increase, a potentially profitable strategy is to expand the number of customers who will demonstrate loyalty to a retailer. Bellenger et al. (1976) found that a predictive relationship does exist between the correlation of a consumer's self-image, the image he has of a store, and his loyalty to that store.

Darden et al. (1975) suggested a life-style analysis to understand the buyer as a whole person (e.g., the activities one engages in, the things that interest one most, and one's opinions on various topics). The results of such an analysis provide a highly descriptive and meaningful profile of customers; thus, a retailer can have an image of his patrons as well as the reverse. Life-style studies typically will also employ the more traditional demographic and socioeconomic measures to complement the psychographic profile (e.g., Tigert, Lathrope, & Bleeg, 1971). By having a detailed image of each target market, a retailer can align merchandising strategy to conform to the various life-style profiles.

The relationship between self-image, product image, store image, and retailer strategy is shown in Figure 1. A retailer should perform a detailed psychographic analysis of consumers in an identified target market. By utilizing a meaningful profile of the activities, interests, attitudes, and personality traits of a particular market segment, a retailer will gain an understanding of self-image characteristics which are important with regard to the purchase of goods and services. A retailer should make strategy adjustments based on self-image elements found in the desired target market. Retailer strategy is based on the relative use of the retailing mix (product, price, promotion, location, service, and personnel), blended with the philosophy of providing customer satisfaction at a profit. It is critical that all elements of the mix are utilized in a congruent, coordinated manner, as this implementation will largely determine a store's image in the marketplace. Other factors which "position" a firm involve the physical facilities such as the store front, colors, air conditioning, parking, lighting, aisle placement and width, elevators, music, amount of inventory, etc., which combine to produce the store's atmosphere. Atmospherics affect the way shoppers feel, their length of stay, the products selected, and purchase probability (Kotler, 1974; Milliman, 1982; Bellizi, Crowley, & Hasty, 1983).

Figure 1

Imagery in Retailing



Self-Image: Of Consumers in the Desired Target Market
Product Image: Of Products the Target Market Seeks
Store Image: The Sum of Image Components
Retailer Strategy: Use of the Retailing Mix

It was established previously that individuals often seek products that are perceived as being congruent with their self-image. Regardless of whether the real or ideal self is most important for a particular purchase, the product helps reduce any disparity that might exist between the real and ideal self (moving a buyer closer to the ideal self). Thus, there is an interaction between a consumer and a product during the course of product utilization. It is the function of a retailer to provide a variety and assortment of products, and in totality a store image, which serve to reinforce the self-image of those who consume the offerings.

Image Equilibrium

A force which moves to maintain the factors of self-image, product image, and store image in harmony for a consumer is "image equilibrium." It exists in a dynamic environment, and in the case of buyer maturation or social mobility it constantly seeks a state of homeostatis. As buyers age and mature, their self-images change (Erikson, 1968); thus, different products become desirable to fulfill the needs inherent with a particular social position. This is especially important when a product is conspicuously consumed; for example, a buyer may desire Izod's alligator shirts rather than Sears' fox. As individuals desire products with a different image, different retailers or stores are patronized that can provide the desired offering (and exhibit the desired store image). Thus, the movement returns to equilibrium where it remains during periods of stable self-image and socialization. Image equilibrium in a dynamic environment helps explain consumer store loyalty as well as shifts in retail store patronage.

The concept of image equilibrium is supported by the "cognitive balance" school of thought which has been prevalent in psychological literature and research. Heider (1946) was one of the first to argue that perceptual unity or harmony (consistencies in perception) apply not only to the physical world but to social events as well. Festinger (1957) proposed the theory of cognitive dissonance, which postulates that an individual experiences discomfort or tension (dissonance) when attitudes and behavior are psychologically inconsistent. In the context of buyer behavior, when cognitive inconsistencies occur due to a product or store being incongruent with a consumer's self-image, the individual will seek to restore image equilibrium. This is accomplished by seeking products (and stores) which are consistent or in harmony with the buyer's perceived self-image.

The use of moderator variables, such as social class and product conspicuousness, to moderate the relationship between self-image/product image congruity and consumer choice has been relatively void of theory (Sirgy, 1982). In cases where an individual has a negative self-image (e.g., "I see myself as low class and I do not like it"), the difference between the real and ideal self becomes more pronounced. Products, therefore, have the potential to serve an even more important psychological function in this case, by virtue of having a greater opportunity to improve one's real self-image. For example, if an individual perceives himself as living in low-class housing, he may respond by purchasing an expensive television set (e.g., Curtis Mathes). The purchase of a high quality, socially visible (conspicuous) product serves a compensation function. Though the individual is not able to obtain many products that are desired, the possession of one prestigious product brand serves an important function. In the extreme case, where an individual reaches the point of despair, the compensation function (and efforts to reduce the disparity between the real and ideal self-images) would not be present. This phenomenon may be explained by Vroom's Expectancy Theory (1964), when the belief that a particular behavioral act (a purchase) will be followed by a particular outcome (an increased self-image) is not probable.

Developing Retail Strategy

The concept of image equilibrium suggests that retailers should identify an image position consistent with the self-image of the target markets they wish to service. Once the image position is identified, retail strategy is built around blending the product mix with the other atmospherics so that store image, product image, and the desired image position of the store are in equilibrium. In selecting the appropriate image position, retailers should be careful to select a position which reinforces the self-perception of a relatively profitable market segment. While size of the segment is crucial, other factors such as competition vying for this segment and the expected increases or decreases (over time) of the segment should be considered. The decision to pursue a specific image position takes money and time. It therefore needs to be considered carefully. Because of the time and expense necessary to establish an image position, these positions should not be changed or discarded casually. Furthermore, frequent discarding of image positions and the frequent pursuit of new image positions is likely to lead to some degree of consumer confusion concerning the image of a retail store. However, retailers need to regularly review their image position. While changes in the image position should not be too frequent or too drastic, fine tuning adjustments should be made occasionally. The decision concerning image position is strategic, not tactical.

Over time, market segments associated with various self-images change. Some segments grow while some segments diminish. Furthermore, individual consumers may move from one segment to another segment as their self-images change. In response to these changes, retailers need to re-examine their image position. Should a decision be made to change the image position, this must be considered a strategic move; and retail managers need to accept a long-term commitment to the new image position. Should retailers desire to operate more like a differentiated marketer and attempt to appeal to several self-image segments, they should do so carefully, taking efforts not to blur or otherwise create consumer confusion regarding the original image position. For example, a retailer that has developed a high-status image position may want to expand operations in order to appeal more to a lower status segment in ways which do not undermine the high-status image position already achieved. This should be accomplished by launching a separate business unit housed in separate stores and operated under a separate name. While the new unit is separated in the minds of the consuming public, the new unit can be tied directly to behind-the-scene operations involving control, buying, staffing, research, and other retail functions that can benefit through economies of scale or management centralization.

Conclusion

A retailer who develops a strategy (and resulting store image) that reinforces a particular self-image profile that is prevalent in a desired target market will realize increased sales from that target. Efforts should be made to reduce the disparity between the "actual" store image, as perceived by the desired target market, and that which the segment perceives as the "ideal" store image. In the 1980s it is rarely possible to be "all things to all people" because of diverging life-styles and subcultures. Retailers who segment the market carefully, develop and implement a congruent strategy, and thereby build a store image which reinforces the proper target market are likely to be very successful. This is not to suggest that there is a magical power related to the development of a favorable image and that a retailer can be successful at attempts to have consumers view the firm in a more favorable light than it deserves. Consumers will not be fooled for very long, and the result will multiply mistrust. It should be remembered that it takes a great deal of effort and often years to develop a favorable image, though it can be tarnished or destroyed very quickly.

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ADJUSTABLE HOME MORTGAGE LOANS: FOUR LEGAL PROBLEMS FOR LOUISIANA

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When the federal government allowed federally-chartered lending institutions to make adjustable rate home mortgage loans (AMLs) in 1981, both bankers and borrowers in Louisiana began asking questions about potential conflicts between federal provisions and parallel state laws. Before these questions could be resolved, however, the so-called "credit crunch" which initiated the drive to pass legislation permitting AMLs subsided. As the need for AMLs slackened, so did interest in the problems created by the interface of conflicting state and federal regulations.

Ignoring the problems has not made them disappear. Borrowers and lenders need to look at the legal aspects of AMLs before many more are issued without heed to these problems, perhaps resulting in chaos in the field of mortgage financing. This need is especially acute today in the face of reports stating that AMLs were the most popular home finance device in 1984.[1] The present attraction for home buyers is that AMLs currently offer initial rates 2.0 percent lower than conventional fixed-rate loans. However, since AMLs are tied to now rising general interest rate levels, lenders, borrowers, and government officials have all expressed concern that future higher payments may result in a wave of defaults and in a flood of litigation. Damage suits already filed against banks for wrongfully issuing AMLs represent a potential $100 million liability for financial institutions.[2] Specifically, the issuance of AMLs raises the following issues with respect to national banks and federal savings and loan associations:

1. Whether the AML is valid in Louisiana;
2. Whether any possible negative amortization permitted by the AML is violative of Louisiana provisions prohibiting usury;
3. Whether any change in the interest rate permitted by the AML affects lien priority; and
4. Whether the AML is enforceable by executory process.

Before any attempt at resolving these issues is made, some discussion of basic AML provisions is necessary. The federal regulations authorizing AMLs provided that the lender can adjust the mortgage interest rate every six months during the term of the loan on the basis of changes in a recognized economic index, such as the Consumer Price Index. Should indices rise, causing a rise in the loan interest rate, lenders are allowed to increase monthly payments, add to the outstanding loan balance, and extend the term of the loan.[3]

Validity

Louisiana law prohibits structuring a home mortgage loan in the manner described above, particularly with respect to causing increases in the interest rate and in the loan balance. A negative answer to the question of whether federal institutions can offer the AML in Louisiana would, therefore, render all other considerations moot. Also, a discussion of the concomitant federal preemption issue will aid in resolving the other questions since this issue permeates this field of law. Under the doctrine of federal preemption, legislation by Congress on a particular subject suspends conflicting state laws in that same legislative field.[4]

Federal authority in this area is unquestionably extant. Regulations provide that the AML regulation "is promulgated pursuant to the plenary and exclusive authority" of the Federal Home Loan Bank Board (FHLBB) "to regulate all operations of Federal associations."[5] Such authority is derived from section 5(a) of the Home Owners' Loan Act of 1933, passed pursuant to Congress' broad authority to regulate interstate commerce.

Federal associations have the right by federal law to offer the AML. Additionally, the regulations provide that:

> This exercise of the Board's authority is preemptive of any state law purporting to address the subject of a Federal association's ability or right to make . . . adjustable mortgage loans, or to directly or indirectly restrict such authority or right.[6]

The strong language of the preemption provision cited above suggests that no state law on the subject can lawfully apply to such federal institutions. Nevertheless, most commentators believe that the federal bar here is not as

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broad as the regulatory language would suggest. As noted in a special *Management Bulletin* of the U.S. League of Savings Associations,

> The preemption should override only those state laws which restrict the structuring of a loan as prescribed by Federal regulation. State laws otherwise affecting home loans, such as recordation, foreclosure, and tax provisions should not necessarily be preempted.[7]

Negative Amortization

In its comments accompanying the final AML regulations, the FHLBB was of the view that individual associations should be free to develop their own standards relative to negative amortization. Therefore, the regulations which allow negative amortization with "no limits on the amount" of such amortization, provide also that negative amortization is allowable if

> . . . the initial payment amount is sufficient to fully amortize the loan at the beginning of the loan term and if the payment amount is adjusted at least every five years to a level sufficient to amortize the loan at the then-existing interest rate and principal loan balance over the remaining term of the loan.[8]

Again the question of federal preemption arises. Because negative amortization in an AML raises the possibility of calculating "interest on interest," such practice may violate Louisiana statutes which disallow recovery of interest on interest ". . . unless it be added to the principal, and by another contract made a new debt."[9] It is the position of the FHLBB that the federal preemption here ". . . has the effect of precluding the application of the laws of approximately 30 states prohibiting the charging of interest on interest."[10] This language clearly indicates the intent of the FHLBB to allow negative amortization on AMLs irrespective of state law to the contrary, although nothing in the regulations themselves supports such a position.[11]

Moreover, another recent federal preemption of state law bolsters the FHLBB's stance. The Depository Institutions Deregulation and Monetary Control Act of 1980 preempts all state mortgage usury laws with respect to federal institutions for first-lien residential mortgage loans. This preemption no doubt applies to Louisiana statutes which exempt certain transactions "from the application of the laws on usury *and* interest upon interest."

Lien Priority

The question of a possible change in lien priority as the result of an increase in the interest rate under an AML is important for two reasons. Aside from the obvious considerations of a mortgagee's position in the event of foreclosure, maintaining a first lien also allows federal institutions to take advantage of the lifting of state usury ceilings, since the 1980 federal preemption negates all state usury laws with respect only to *first*-lien residential mortgages.

Again the question of federal preemption arises here—specifically, whether the AML regulations exclude the operation of state lien ranking and recording laws relative to AMLs. As noted above, the U.S. League of Savings Associations would answer this question "no."

Thus, assuming the applicability of state law in this area, it must be determined whether a mortgage securing a debt envisioning an increase in the interest rate, and subsequently, in the loan balance is valid and, if so, whether such mortgage is effective as of the date of its filing (recordation). Three alternatives readily suggest themselves:

(1) Maintenance of the ARM's priority despite subsequent interest rate increases;
(2) Giving priority to junior lienors, but only with respect to any additional loan balance engendered by an interest rate increase; or
(3) Re-ranking of the entire mortgage, effective as of the date of any interest rate increase.

Finding an appropriate legal framework in which to analyze this problem is not easy. In Louisiana, mortgages are regulated primarily by the provisions which exist today as they were when originally promulgated in 1825. The legal researcher, then, is faced with the difficult task of applying codal principles to the AML enacted over 150 years before the latter was contemplated. However, because an increase in the interest rate necessarily includes an increase in the unpaid loan balance, there is some hope that existing statutes can be used to resolve the issue. Two Civil Code articles permit the securing of a future obligation by a prior mortgage.

> But the right of mortgage, in this case, shall only be realized in so far as the promise shall be carried into effect by the person making it. The fulfillment of the promise, however, shall import to the mortgage a retrospective effect to the time of the contract.[12]

While the codal provisions make "future advances" mortgages permissible in Louisiana, effective retroactively to the date of the contract, this is not the case in reality as noted by Professor Vetter of the Loyola Law School.

> . . . if . . . advance mortgages were to outrank all subsequent mortgages, then once a person granted such a mortgage, he could no longer obtain second mortgage financing—no one would lend money on security which could be reduced by a subsequent action of the first mortgage.[13]

Vetter states further that future advances mortgages will be given retroactive rank only if the advances secured by the mortgage are certain, as opposed to a purely optional obligation to contract future loans.

A recent case, *Hortmen-Salmen Co. v. White,* deals squarely with this issue. At question here was whether materialmen's liens, recorded after a valid mortgage, had priority over the first mortgage when certain future advances secured by such mortgage were made after recordation of the liens. Relying on the language of Civil Code § 3293, the court concluded that the mortgage was given retroactive effect to the date of its recordation upon completion of the loan agreement.

Vetter suggests that freedom of property disposition is also at the heart of the rule of *Hortmen-Salmen*. The AML presents peculiar problems in the field of future advances. First, it must be determined whether the increased loan balance engendered by a rise in the interest rate is a future advance. Although some would question the relationship alleged here, there is a similarity strong enough to suggest at least a conceptual analogy between interest rate increases and future advances.

Also, the question of whether § 3293 applies to an AML, which secures both present and future debts, must be answered. At least one Louisiana case held that a mortgage securing an existing debt may also secure future advances. However, the factual circumstances in such a case must clearly indicate the intention of the parties to engage in such an agreement.[14] Assuming this argument is not viable, equity dictates that lien priority should be lost in such cases only with respect to the amount of outstanding loan balance attributable to the incremental interest rate increase.

Finally, one must determine whether AML interest rate increases constitute optional or certain future advances. Here the answer clearly depends on each particular loan agreement. Although changes in the interest rate on an AML are based on the movement of an index beyond the control of the parties, the frequency of rate increases and whether such occurrence is optional or mandatory are presumably left to the will of lender and borrower as determined in their contract. Thus, their actions will determine the nature of the future advances contemplated by interest rate increases. The *Management Bulletin* cited above takes note of this fact and advises mandatory, automatic increases at fixed intervals to secure lien priority. In light of policy considerations favoring notice to potential junior lienors, the recorded loan/mortgage agreement should also contain information sufficient to identify it as a certain future advance. Lest this issue seem clearly resolved, La. R.S. 6:829 (1970) (making security for advances subordinate to liens recorded prior to the making of such advances) casts doubt on the foregoing.

Again, the key question in this instance is whether compliance with the above-stated state law provision is mandatory upon federal institutions; only this time the question transcends the particularized federal preemption of the AML regulation. At issue here is whether Louisiana has any right at all to regulate the affairs of federal savings institutions in light of the FHLBB's exclusive authority "to regulate all operations of federal associations." Under the predecessor to the current Louisiana Savings and Loan Act, the answer was a resounding "no."[15]

This answer may have changed, however, when the state legislature enacted new state banking laws in 1970. The new act is designed to subject federal institutions to state banking laws absent federal authority to the contrary. It must be asked here whether a state can legislate in an area already covered by federal law in light of the "exclusive" authority to regulate federal institutions granted to the FHLBB by the Home Owners' Loan Act of 1933.

In a recent federal case,[16] the question of whether a California provision concerning loan prepayments was preempted by federal law was before the court. Relying on the Supremacy Clause of the Constitution and the fact that 12 C.F.R. 545.6-12(b) specifically addresses the prepayment issue, the court found state law has no effect as to federal associations. This case could be read to preclude any state regulation in the home loan field, and, in fact, many early cases so held.[17]

The result achieved in these early cases, however, is not an accurate reflection of the law. Generally, a state law will not be preempted where federal law is silent concerning the specific subject matter of the particular state statute in question.[18]

Thus, the question here again assumes its factual nature: Does federal home loan law address the subject of lien priority on future advance mortgages? Research has not revealed any federal regulation on this point. Therefore, one can assume that Congress has at least implicitly given states the right to legislate in the field of lien priority even with respect to federal savings associations.

Having established the applicability of 6:829 on federal institutions, it must be determined whether the statute's operation here precludes the effects of the Louisiana Civil Code articles on mortgages as would seem to be the case from a casual reading of 6:829. However, Vetter suggests that 6:829 and R.S. 6:827 (authorizing advances for taxes, insurance premiums, repairs, etc.) "are apparently purely optional future advance mortgages . . . ." Professor LeVan additionally implies that the future advances allowed by 6:829 can be modified by the loan agreement between the parties.[19] Whether these implications necessarily lead to the conclusion that lender and borrower can contract on AMLs not subject to R.S. 6:829 is open to question. The current statutes or their predecessor have never been interpreted by Louisiana courts. One must resort, then, to equitable arguments, taking into account the policy reasons behind the relevant legislation.

The *Bulletin* offers a compelling argument that certain, determinable future advances can be secured by the first lien if such advances are determinable with respect to both timing and amount and if subsequent creditors are given notice of the impending future advances. This fact, coupled with the view that advances authorized by 6:829 are purely optional advances, lends some (albeit not much) credit to the position advocated by Vetter and LeVan. Again, however, strict compliance with the requirements set out in the *Bulletin* is probably necessary if an AML is to defeat the operation of 6:829.

Should this novel argument be rejected, it is still doubtful that the AML in its entirety would be primed by a subsequent lien. La. R.S. 6:829 provides that a junior lien primes the first mortgage only with respect to the amount of the future advance.

Another possible solution which readily suggests itself

MID-SOUTH ECONOMY

BUREAU OF BUSINESS & ECONOMIC RESEARCH THE FOGELMAN COLLEGE OF BUSINESS AND ECONOMICS MEMPHIS STATE UNIVERSITY

STATISTICAL SUPPLEMENT

THE MID-SOUTH ECONOMY

Economic news continues to be favorable for the U.S. and Mid-South economies. The revival of economic activity at the end of 1984 brought further gains in employment, income, and consumer spending in both January and February. Revised estimates of the nation's real Gross National Product show an increase of 4.9 percent in fourth quarter 1984. The upward revision can be traced to large revisions in net exports and inventory investment. Constant dollar personal consumption expenditures also rebounded in the fourth quarter of 1984, with the largest increase in the durable goods sector. Industrial production increased 0.4 percent in November. The overall rise in January is based on strong gains in automotive products, defense equipment and energy materials with relatively little change elsewhere. At 166.6 percent of the 1967 average, the production index for January was 5.1 percent above a year earlier. Additionally, the Composite Index of Leading Indicators—a measure designed to foreshadow turning points in economic activity—rose 1.7 percent in January following declines in four of the eight previous months. This seesaw pattern evident in the leading index over the past eight months is consistent with forecasts calling for moderation in economic activity during 1985.

The absence of price pressures from food and energy and the continued moderation effects of the strong U.S. dollar point to another year of successful control over inflation. January's inflation numbers were lower than most observers expected with consumer prices increasing 0.2 percent, producer prices for finished goods unchanged, and commodity spot prices falling 0.9 percent. The key, however, remains in the area of labor cost. So long as labor cost remains subdued, and assuming no sustained sharp change in the value of the U.S. dollar or energy prices, there is little prospect of significant mounting of overall inflationary pressures. Furthermore, a slower pace of economic activity and lower expectations about inflation are expected to keep interest rates near their current levels. Given this outlook for inflation and interest rates, the major sources of restraint on growth will be the federal deficit and the international trade deficit.

LABOR

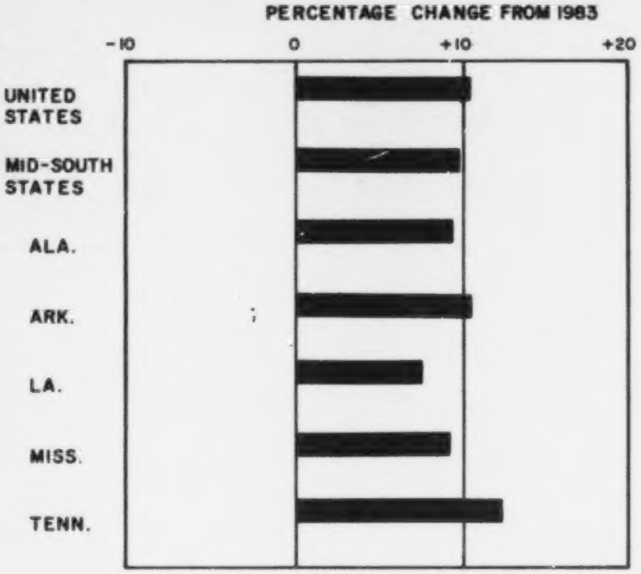
Since last January, non-agricultural employment in the Mid-South rose 3.3 percent compared to a 4.1 percent gain nationally. Mid-South manufacturing employment gained 23,700 jobs with durable goods production employment climbing 33,300 jobs and non-durable goods production employment slipping 9,600 workers. Non-manufacturing employment registered a solid gain of some 158,900 jobs. The number of persons unemployed across the Mid-South declined 6.2 percent to total 841,500 for January 1985. However, the Mid-South civilian labor force topped the 8.0 million mark, a gain of 1.7 percent, slightly below the national rate of 2.0 percent, causing the unadjusted aggregate unemployment rate to remain in double digits. The January 1985 unemployment rate of 10.5 percent is only slightly below the 11.4 percent rate registered last January.

Nationally, the unemployment rate has held quite steady since last May. Contributing to this lack of movement downward in the unemployment rate has been the influx of re-entrants into the work force and a rising participation rate. The current participation rate of 65.1 percent of the non-institutional population is at its highest level in years and the number of re-entrants returning to look for work increased 450,000 above last January's level. However, the number of first-time entrants into the work force actually registered a decline from a year ago.

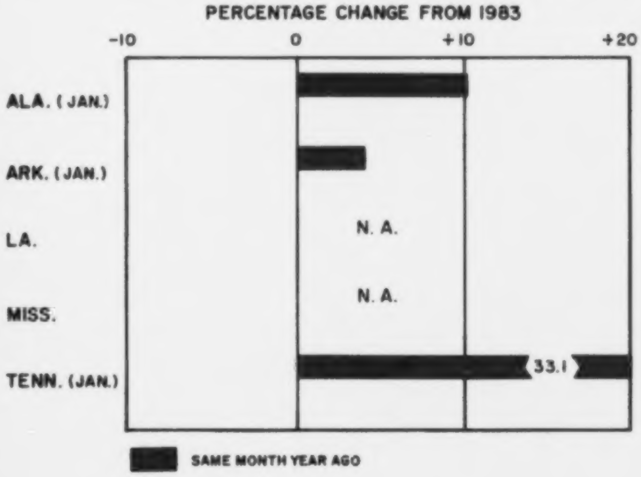
CONSTRUCTION

For the twelve months ending January 1985, the dollar value of total building permits nationally increased 12.5 percent over the comparable 1984 period. Non-residential building activity climbed 19.3 percent with residential activity registering a modest gain of 7.5 percent. The number of dwelling units, however, remained virtually unchanged from the 1984 pace of 1.6 million units. Though the pace of construction activity jumped in January, rising vacancy rates in rental units and still relatively high mortgage delinquency rates are expected to

PERSONAL INCOME - III QTR. 1984

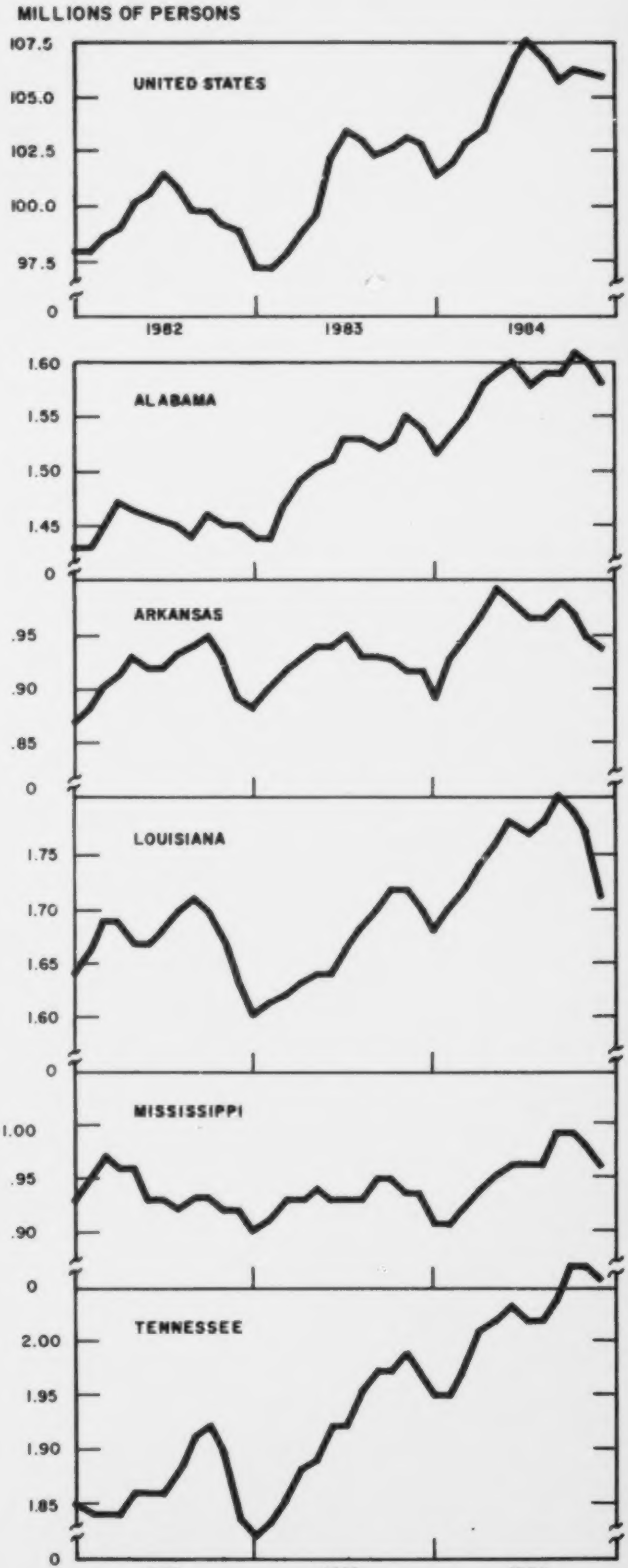


SALES TAX COLLECTIONS 1984

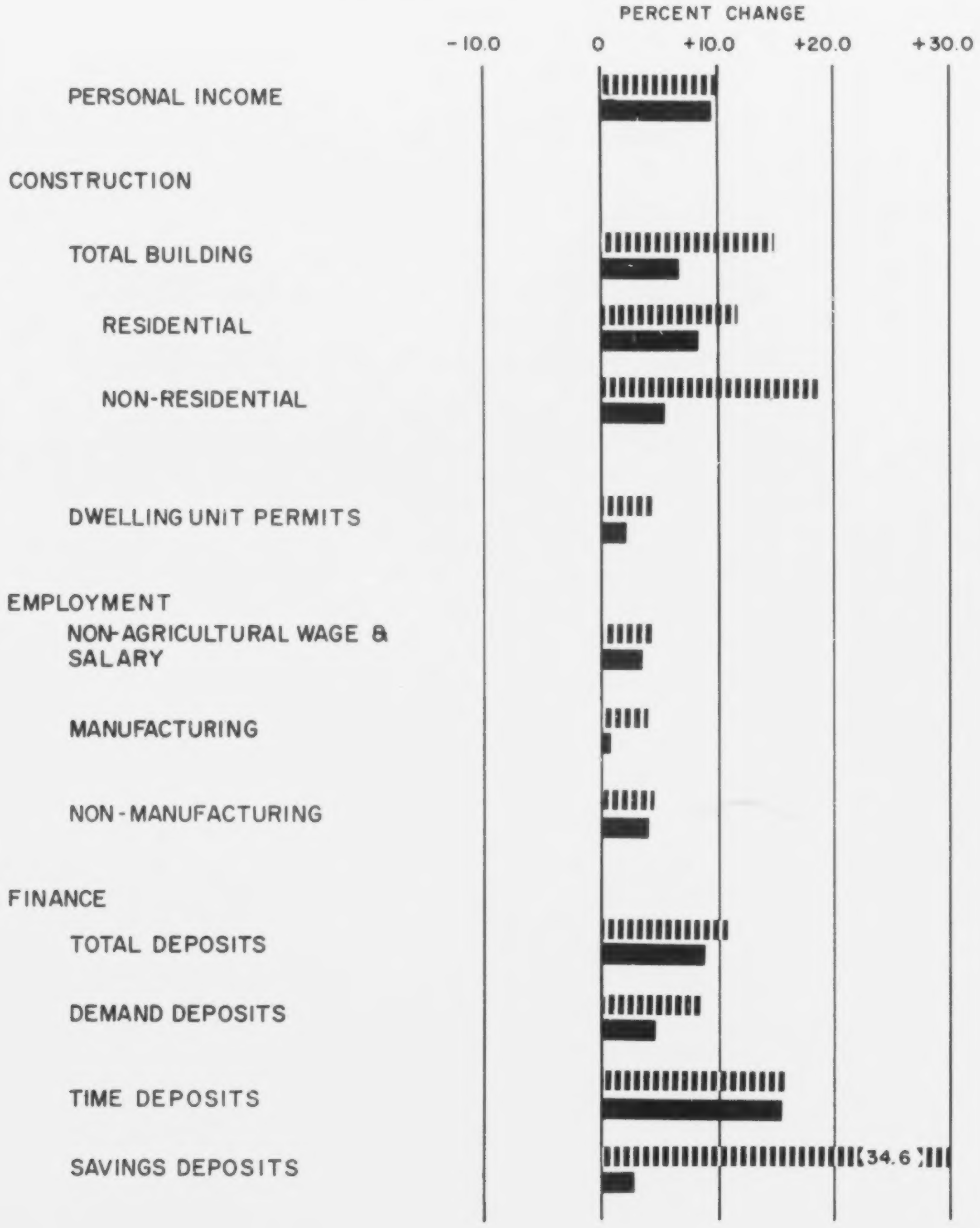


SOURCES: BUREAU OF ECONOMIC ANALYSIS
STATE DEPARTMENTS OF EMPLOYMENT
SECURITY AND REVENUE.

TOTAL EMPLOYMENT



THE MID-SOUTH ECONOMY AND U.S. ECONOMY
1984 COMPARED WITH 1983



SOURCE: SURVEY OF CURRENT BUSINESS; FEDERAL RESERVE BANK OF ATLANTA; BUREAU OF ECONOMIC ANALYSIS; STATE EMPLOYMENT SERVICES.

Legend
UNITED STATES ▥
MID-SOUTH ■

ANALYSIS OF ANNUAL CHANGES IN THE MID-SOUTH ECONOMY

On balance, 1984 was a prosperous year for the Mid-South and national economies. The nation's real Gross National Product, the measure of total production of goods and services, grew 6.9 percent during 1984. This annual figure, however, is an average of very rapid growth during the first half of 1984 and a slowing of growth during the second half. During the first two quarters, the U.S. economy was expanding at an annual rate of 8.6 percent, representing some of the most rapid growth since the Korean War years. Growth slowed during the final two quarters, declining to a 2.7 percent annual rate, with the effects of the slowdown widespread. Personal consumption expenditures dropped from a 6.3 percent rate in the first half of 1984 to a 2.3 percent pace in the last half. In addition, the rate of growth in gross private fixed investment was cut in half during the second half pause, declining precipitously from the torrid 18.5 percent pace set in the first half. However, by the close of 1984, the national and Mid-South economies began to regain momentum. Total employment resumed its growth in November and the jobless rate began to retreat again as the year ended. Business inventories registered a significant slowing during the fourth quarter, eliminating excess inventories accumulated during the third quarter, and corporate profits (less inventories and depreciation adjustments) registered impressive gains for 1984, pushing them to an all-time high. Inflation remained subdued, rising 4.3 percent for 1984, and productivity continued to rise, climbing 3.3 percent in 1984. In fact, output per hour has been increasing at a 3.2 percent compounded annual rate for the last two years.

While the upbeat economic data concerning the final months of 1984 indicate that business activity is emerging from the third quarter slowdown, some sectors of the economy remain sluggish. The rate of home construction has fallen short of that experienced in previous expansions. Housing starts are only 15.0 percent above the level posted at the 1982 trough—undoubtedly a reflection of still high mortgage interest rates and rising new home prices. Weaknesses persisted in the energy, textile, and agricultural sectors and the foreign trade sector has yet to share in the current recovery phase. The trade deficit was given a boost in the fourth quarter by a sharp slowing in imports—a delayed response to the pause in economic activity during the third quarter. This development, however, is unlikely to be repeated now that demand is picking up and the dollar remains strong. Because of the strength of the dollar, the robust U.S. expansion has caused an unprecedented flood of imports while slowing exports. Imports, which after adjustment for inflation have equaled about 5.0 percent of real Gross National Product on average, have doubled their share in the current upturn. Add to this the diminished price competitiveness of U.S. produced goods in world markets due to the strong dollar, and it is hardly surprising that the U.S. ran a record merchandise trade deficit in 1984.

Table 1
1984 PERSONAL INCOME AND PERCENTAGE CHANGE FROM 1983

Area	Personal Income, First Nine Months, 1984 (Millions)	Percent Change From First Nine Months, 1983
United States	$2,970,834	+10.0
Mid-South Region	182,743	+ 9.6
Alabama	39,680	+ 9.6
Arkansas	22,733	+ 9.9
Louisiana	48,301	+ 5.4
Mississippi	22,732	+10.5
Tennessee	49,297	+13.6

Source: Bureau of Economic Analysis.

Table 2
1984 MID-SOUTH SALES TAX COLLECTIONS AND PERCENTAGE CHANGE FROM 1983

Area	1984 Collections (Thousands)	Percent Change From 1983
Mid-South States	$4,510,862	+27.2
Alabama	704,299	+15.6
Arkansas	582,835	+45.8
Louisiana	912,300	- 1.4
Mississippi	726,985	+25.2
Tennessee	1,584,443	+29.3

Source: State Departments of Revenue.

After surging forward early in 1984, the Mid-South economy slackened in the summer when rising interest rates quickly depressed residential housing sales and construction. As the summer wore on, a slump in consumer demand for a broad array of goods besides housing became apparent, which most analysts felt was merely a normal consumer response to the brisk pace set in late 1983 and early 1984. However, despite the abatement in economic activity, personal income grew 9.6 percent for the first nine months of 1984 compared to the same period in 1983, slightly underperforming the national gain of 10.0 percent. Mississippi and Tennessee registered the best gains with Louisiana lagging the Mid-South states. Mid-South manufacturing employment managed only a slight gain from December 1983 levels, with growth in the non-manufacturing sector up 3.9 percent from a year ago. Although job growth continued through most of the year,

Table 3

LABOR, DECEMBER 1984, AND PERCENTAGE CHANGE FROM DECEMBER 1983

LABOR DECEMBER 1984	United States (November)	Mid-South States				
		Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Civilian Labor Force	114,115,000	1,806,200	1,030,600	1,953,900	1,089,800	2,264,300
Percent Change Year Ago	+ 1.8	+ 4.2	+ 4.6	+ 3.3	+ 4.4	+ 4.0
Unemployed	7,869,000	210,600	94,800	203,700	120,000	184,800
Percent Change Year Ago	-13.8	+ 6.9	+ 0.1	+ 4.3	+13.0	- 9.7
Unemployment Rate						
1984	6.9	11.7	9.2	10.4	11.0	8.2
1983	8.1	11.4	9.4	10.3	10.2	9.4
Non-Agricultural Wage & Salary Employees	95,453,000*	1,351,300	796,000	1,582,700	818,800	1,833,700
Percent Change Year Ago	+ 4.1	+ 0.9	- 1.9	+ 0.1	+ 1.7	+ 3.8
Manufacturing Employment	19,704,000*	336,000	212,300	182,600	209,900	488,500
Percent Change Year Ago	+ 3.6	- 2.8	- 0.8	+ 2.4	- 0.2	+ 0.7
Non-Manufacturing Employment	75,749,000*	1,015,300	583,700	1,400,100	608,900	1,345,200
Percent Change Year Ago	+ 4.2	+ 2.2	- 2.3	- 0.2	+ 2.4	+ 5.0
Average Weekly Earnings of Production Workers in Manufacturing	$378.51	$346.52	$301.18	$433.88	$292.03	$ 334.4[illegible]
Percent Change Year Ago	+ 3.4	+ 7.8	+ 2.2	+ 7.9	+ 1.2	+ 6.5
Average Weekly Hours of Production Workers in Manufacturing	40.7	41.5	40.7	41.8	40.9	41.1
Percent Change Year Ago	- 0.2	- 0.2	+ 0.0	+ 2.7	- 1.7	- 1.4
Average Hourly Earnings of Production Workers in Manufacturing	$ 9.30	$ 8.35	$ 7.40	$ 10.38	$ 7.14	$ 8.02
Percent Change Year Ago	+ 3.7	+ 8.0	+ 2.2	+ 5.1	+ 2.9	+ 5.0

*Seasonally adjusted.

Source: Departments of Employment Security and Survey of Current Business.

the rate dropped in the fourth quarter, no doubt reflective of the sluggish growth during the third quarter.

The Mid-South's unemployment rate also mirrored these developments. The Mid-South civilian labor force grew at a rapid 3.4 percent from last December's level and the number of unemployed climbed 9.0 percent. This caused the unadjusted aggregate unemployment rate for the Mid-South to rise to 10.0 percent compared to 9.5 percent a year earlier. Additionally, the locus of unemployment has shifted markedly in a very short time, attesting

Table 4

PERCENTAGE CHANGE IN BUILDING ACTIVITY FOR 1984
COMPARED TO 1983

CONSTRUCTION[1] NOVEMBER 1984	United States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Total Building Percent Change Year Ago	+14.6	+19.2	N.A.	- 2.6	+25.3	+ 6.5
Residential Building Percent Change Year Ago	+11.4	+ 7.5	N.A.	- 2.0	+18.6	+15.8
Non-Residential Building[2] Percent Change Year Ago	+18.8	+28.4	N.A.	- 3.1	+37.3	- 4.9
Total Dwelling Unit Percent Change Year Ago	+ 4.1	- 5.7	N.A.	-15.6	+12.5	+22.5

[1] Twelve-month cumulative rate.

[2] Non-residential data exclude the cost of construction for publicly-owned buildings.

Source: The Federal Reserve Bank of Atlanta from data supplied by the Bureau of Census.

to the influence of both cyclical change and industrial mix on the fortunes of the Mid-South. Mississippi and Louisiana were only two of six states across the country which failed to regster a significant unemployment rate decrease between 1982 and 1984. Further, the sluggishness in the Mid-South employment situation stems partly from its heavy concentration of goods-producing industries and the fact that a large portion of the Mid-South's population resides in non-metropolitan areas—48.0 percent in 1980 compared to 25.0 percent nationally.

For the twelve-month period ending November 1984 compared to the same period in 1983, the value of total building activity in the Mid-South was only 6.6 percent above year-ago levels, compared to a 14.6 percent rise nationally. Residential building activity was 8.1 percent higher than a year earlier. Alabama and Mississippi registered gains in single-family construction with Tennessee's gain coming from multi-family construction. Total dwelling units, however, registered a moderate increase of 2.0 percent for the Mid-South region, half the national increase of 4.1 percent. Non-residential building activity managed a gain of 5.2 percent over year-ago levels, but underperformed the national increase of 18.8 percent.

The Mid-South financial sector underwent significant upheavals in 1984. Geographic banking frontiers were broadened when Louisiana passed a bill to permit multi-parish bank holding companies, and Tennessee made progress on easing the plight of some troubled financial institutions. Mortgage lending at Mid-South savings and loans increased a modest 4.0 percent in 1984 compared to 1983, with net savings flow below the levels of a year ago. Commercial banks in the Mid-South registered an 8.5 percnet rise in total deposits over 1983, compared to a 10.4 percent rise nationally.

The Mid-South agricultural sector has been especially hard hit by reductions in foreign demand. Weather-related problems have kept crop yields below expectations, but farm production is still above the levels needed to satisfy domestic demand. Low prices for farm products, heavy indebtedness, and high credit cost remain major hurdles facing Mid-South farmers. And, unless the dollar declines sharply in value against other currencies, pressures on the agricultural sector will continue to mount.

In summary, the unbalanced growth occurring in 1984 created many problems for the Mid-South economy. Defense-related manufacturing, especially electrical and electronic machinery and equipment, registered solid growth in 1984 with much of the textile manufacturing sector undergoing a fairly dismal year. Agriculture, energy, and export-related businesses remained weak in 1984 due to the high international value of the dollar. Mid-South non-manufacturing employment was up 3.9 percent above year-ago levels, with services and government employment registering the better gains. However, because most of the Mid-South products rely on national and international markets, continued growth in demand in these areas is vital to future economic performance of the Mid-South economy.

Table 5

1984 SAVINGS AND LOAN ACTIVITY AND PERCENTAGE CHANGE FROM 1983

SAVINGS AND LOAN ACTIVITY	Alabama	Arkansas	Louisiana	Mississippi	Tennessee[1]
Mortgage Loans Made (millions)	\$950.4	\$1,455.9	\$2,365.9	\$557.5	\$952.2
Percent Change Year Ago	+14.3	-28.1	+15.5	+53.8	+23.0
Net Savings Flow (millions)[2]	\$628.6	\$1,075.8	\$1,897.6	\$356.9	\$488.5
Percent Change Year Ago	- 5.2	-25.6	- 6.4	+24.4	-28.9

[1] Figures are for total loans made.

[2] Net Savings flow equals new savings received plus dividends credited minus savings withdrawn.

Source: Federal Home Loan Banks of Little Rock, Cincinnati, and Atlanta.

Table 6

BANKING: MEMBER BANKS AS OF 12/5/84: PERCENTAGE CHANGES FROM COMPARABLE 1983 PERIOD

FINANCE	United States	Mid-South States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Total Deposits	+10.4	+ 8.7	+11.6	N.A.	+ 6.2	+ 7.8	+10.0
Demand Deposits	+ 8.5	+ 4.6	+ 5.2	N.A.	- 0.6	+ 3.7	+11.7
Time Deposits	+15.7	+15.4	+22.1	N.A.	+13.0	+12.3	+15.1
Savings Deposits	+34.6	+ 2.4	+ 6.8	N.A.	+ 3.6	+ 2.3	- 1.4

Source: The Federal Reserve Bank of St. Louis and the Federal Reserve Bank of Atlanta.

dampen the expectations of builders and lenders in the months ahead. In fact, the National Association of Home Builders Index dropped in February and March reflecting lower expectations by builders and slightly higher mortgage interest rates. In addition, the National Association of Realtors reported a 2.7 percent decline in the sales of existing single-family units in February with the resale price only slightly better than a year earlier.

For the Mid-South states, the total dollar value of residential building permits increased 3.1 percent for the twelve months ending January 1985 compared to the same period in 1984. However, the number of single-family units declined 3.5 percent and the number of multi-family units slipped 2.1 percent. On the non-residential side, total building activity across the Mid-South jumped 8.2 percent. The major categories of hospitals and stores registered the better gains in the Mid-South.

With housing market conditions not as robust as builders hope, the outlook remains cloudy. Builders still hold a seven-month inventory of new single-family units and, according to the National Association of Realtors, the rise in family incomes has trailed the rise in income needed to qualify for a mortgage. Moreover, the average price of a new single-family house rose 5.5 percent from a year earlier to total $97,300.00. Though the cost of building supplies and labor are holding steady, land and development costs have been escalating.

LABOR January 1985	United States (December)	Mid-South States				
		Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Civilian Labor Force	114,028,000	1,789,500	982,700	1,911,900	1,073,800	2,246,400
Percent Change Year Ago	+ 2.0	+ 2.5	- 1.9	+ 1.3	+ 2.6	+ 4.3
Unemployed	7,979,000	202,200	94,900	213,800	124,700	205,900
Percent Change Year Ago	-11.3	- 5.3	- 9.4	+ 3.6	+ 1.2	- 6.5
Unemployment Rate						
1985	7.0	11.3	9.7	11.2	11.6	9.2
1984	8.0	12.2	10.5	10.9	11.8	10.2
Non-Agricultural Wage & Salary Employees	95,798,000*	1,370,100	780,900	1,588,800	831,900	1,810,600
Percent Change Year Ago	+ 4.1	+ 1.8	+ 4.2	+ 1.7	+ 3.9	+ 4.0
Manufacturing Employment	19,796,000*	352,500	210,600	180,300	219,100	490,200
Percent Change Year Ago	+ 3.4	+ 0.6	+ 1.8	+ 2.9	+ 2.3	+ 1.6
Non-Manufacturing Employment	76,002,000*	1,017,600	570,300	1,408,500	612,800	1,320,400
Percent Change Year Ago	+ 5.2	+ 2.3	+ 5.1	+ 1.6	+ 4.4	+ 4.8
Average Weekly Earnings of Production Workers in Manufacturing	$387.81	$338.58	$302.13	N.A.	$291.31	$333.34
Percent Change Year Ago	+ 4.1	+ 6.1	+ 1.1		+ 3.9	+ 5.8
Average Weekly Hours of Production Workers in Manufacturing	41.3	40.5	40.5	N.A.	40.8	40.4
Percent Change Year Ago	+ 0.2	- 0.9	- 1.2		+ 0.7	+ 0.9
Average Hourly Earnings of Production Workers in Manufacturing	$9.39	$8.36	$7.46	N.A.	$7.14	$8.17
Percent Change Year Ago	+ 3.9	+ 7.2	+ 2.3		+ 3.2	+ 4.7

*Seasonally adjusted.

Source: Departments of Employment Security and Survey of Current Business.

CONSTRUCTION[1] January 1985	United States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Total Building Percent Change Year Ago	+12.5	+19.5	N.A.	- 1.4	+25.2	+ 4.1
Residential Building Percent Change Year Ago	+ 7.5	+ 2.0	N.A.	- 5.3	+21.8	+11.5
Non-Residential Building[2] Percent Change Year Ago	+19.3	+33.7	N.A.	+ 2.3	+30.8	- 5.3
Total Dwelling Unit Percent Change Year Ago	+ 0.9	- 8.1	N.A.	-19.9	+ 9.2	+14.6

[1] Twelve-month cumulative rate.

[2] Non-residential data exclude the cost of construction for publicly-owned buildings.

Source: The Federal Reserve Bank of Atlanta from data supplied by the Bureau of Census.

FINANCE

U.S. financial markets, aided by a more accommodating Federal Reserve and continued inflows of foreign capital, continue to absorb record amounts of debt financing. Currently, the non-federal component of debt is growing at an annual rate of 13.0 percent with the federal component growing approximately 17.0 percent annually. This borrowing rate is twice any rate reached prior to 1983. However, short-term interest rates are, on average, about 200 basis points below last October, and the conventional mortgage rate is some 50 basis points lower. The major concern now is that, should the foreign exchange value of the dollar take a steep decline, capital inflows from foreigners would cease causing upward pressures on U.S. interest rates. On the other hand, one fact that could contribute in keeping interest rates steady is the amount of personal savings. Currently, individuals are saving some $37.1 billion more than they did a year ago.

For the Mid-South, total deposits at commercial banks rose 9.3 percent in February compared to a 10.3 percent increase nationally. Mortgage lending at Mid-South savings and loans totaled $409.9 million in January, a decline of 19.1 percent from a year earlier. And, contrary to the national trend, savings deposits at commercial banks and net savings flows at savings and loans were below par across most of the Mid-South states.

FINANCE February 1985	United States	Mid-South States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Member Banks as of Percent Change from Comparable Date 4/6/84							
Total Deposits	+10.3	+ 9.3	+12.3	N.A.	+ 8.3	+ 6.4	+ 9.9
Demand Deposits	+ 5.6	+ 0.3	+ 3.1	N.A.	- 2.6	- 0.9	+ 1.5
Time Deposits	- 3.6	+13.7	+16.5	N.A.	+13.0	+10.9	+14.2
Savings Deposits	+11.8	+ 4.7	+ 8.1	N.A.	+ 7.3	- 0.6	+ 2.2

Source: The Federal Reserve Bank of St. Louis and the Federal Reserve Bank of Atlanta.

SAVINGS AND LOAN ACTIVITY January 1985	Alabama	Arkansas	Louisiana	Mississippi	Tennessee[1]
Mortgage Loans Made (millions)	$73.0	$69.6	$132.9	$57.0	$77.4
Percent Change Year Ago	+ 78.0	-66.7	-26.6	+122.6	+ 54.2
Net Savings Flow (millions)[2]	$75.9	$32.0	$140.9	($11.3)	($69.5)
Percent Change Year Ago	+197.6	-46.4	-13.3	- 50.7	-222.9

[1] Figures are for total loans made.

[2] Net savings flow equals new savings received plus dividends credited minus savings withdrawn.

Source: Federal Home Loan Banks of Little Rock, Cincinnati, and Atlanta.

TENNESSEE ECONOMY

The performance of the Tennessee economy remains robust. From third quarter 1983 to third quarter 1984, total personal income grew 12.1 percent compared to a 10.2 percent gain for the nation. Non-agricultural employment for January 1985 increased 4.0 percent from a year ago, about the same as the national rate. Retail sales rose 8.9 percent from fourth quarter 1983 to fourth quarter 1984, outperforming the national increase of 8.3 percent. And, sales tax collections totaled $169.7 million in January 1985, up 33.1 percent from last January.

For the twelve-month period ending January 1985 compared to the same period in 1984, total building activity increased 4.1 percent, well below the national rate. However, residential activity outperformed the nation with a gain of 14.6 percent in the number of units compared to no gain for the nation. Multi-family units registered very little gain. Non-residential building activity declined 5.3 percent from year ago levels with losses concentrated in stores and schools.

Tennessee's farmers harvested a total of 1.85 million acres in 1984, a decline of 6.0 percent over 1983, the lowest acreage since 1976. However, soybean production was the third highest on record and wheat yields were the second highest on record. Corn production was the highest level since 1950, and cotton production was the highest since 1973 and more than double the bales harvested in 1983. Tobacco production also registered a healthy gain of 34.0 percent over last year.

The pace of growth in manufacturing employment has slowed in recent months, registering a modest gain of 1.6 percent over last January, underperforming the national gain of 3.4 percent. The durable goods sector gained 10,200 jobs from a year ago, primarily in the furniture/fixtures and non-electrical machinery industries. Non-durable goods industries lost 2,400 workers, primarily in textiles and leather production. However, paper, printing and publishing industries registered a gain of 2,300. The outlook for Tennessee's manufacturing sector rests on turning back the loss of jobs to foreign competitors and continued strength in consumer purchases of housing and automobiles.

is the collateral mortgage device. This option, in which the borrower issues a mortgage note to the lender with a face amount far in excess of the amount loaned and of any expected future advances while the borrower makes "hand notes" in the amount of credit actually extended, is particularly attractive, since state law provides that all future advances extended under a collateral mortgage agreement relate back to the date of the original loan. Thus, the thorny issue of ranking future advances could be avoided. Moreover, since the mortgage note has a specific, definite face value, the problems relative to executory process, as will be seen below, can also be avoided by using a collateral mortgage scheme in conjunction with an AML.

Enforcement of AMLs by Executory Process

Executory process, a quick and inexpensive means of enforcing liens, is provided for in article 2631 *et seq.* of Louisiana's Code of Civil Procedure (C.C.P.). Its primary purpose is:

> . . . to effect the seizure and sale of property, without previous citation and judgment, to enforce a mortgage . . . evidenced by an authentic act importing a confession of judgment . . . .

Before treating the specific legal issues presented by AMLs with respect to this procedure, a discussion of the preemption question here is again necessary. The *Bulletin* hinted that state law regulating executory process is beyond the scope of the federal preemption. These laws, after all, govern enforcement of mortgages; they in no way regulate a lender's right or ability to offer a certain type of loan.

However, it can be argued that preemption does apply here. At least one commentator has noted the public policy behind executory process: "As a result of this simplified collection procedure, both the consumer and the creditor are benefited by lower interest rates and more available credit."[20] Here arises at least a suggestion that the harsh *stricti juris* rules concerning executory process in Louisiana should be relaxed. The basic motivating factor behind the AML regulation—increasing the availability of home mortgage money—also supports at least a broad reading of state executory process statutes relative to AMLs.

Nevertheless, the relative weight of authority indicates that application of state law in the area of executory process will continue. Thus, formation of an outline of the relevant Louisiana procedures and a discussion of the controversy which will inevitably arise when a lender needs to enforce his AML by executory process are in order.

Executory process is an expedited, less expensive, and less time-consuming process for lenders. Because this expedient procedure comports with traditional judicial notions of fairness, such as notice, time to answer, and adversary proceedings, the jurisprudence requires meticulous compliance with the dispositions laid out in the C.C.P. Failure to do so means that the creditor must file an ordinary proceeding to enforce his claim.

The most onerous duty imposed on a creditor by the Code is the requirement that all evidence supporting plaintiff's claim be authentic (documentary evidence executed before a notary and two witnesses). This requirement of authentic evidence is relaxed only in those cases and to the extent provided by law. One comment provides that: ". . . [t]he requirement of authentic evidence to support every link in the chain of evidence in an executory proceeding is the *very foundation* of executory process"[21] (emphasis added). Given this strong language, a lender in an executory proceeding must provide authentic evidence of: (1) the obligation sought to be enforced (as to its existence and its amount); (2) the existence of a mortgage on the property to be sold; and (3) the creditor's right to enforce the mortgage. As will be shown more fully below, there are exceptions to this last rule. However, such exceptions are few and limited in their application, and those recognized are given strict construction.

The importance of the foregoing to the present controversy manifests itself thus: The Code requires authentic evidence of the amount of indebtedness sought to be enforced. Since an AML provides for a floating interest rate ascertainable only through resort to an index not a part of the loan/mortgage agreement and to testimony on the subject, obtaining authentic evidence of an outstanding loan balance in the event of foreclosure is impossible absent some exception to the rule set out or some contrivance which would render a loan balance at least determinable through examination of the loan/mortgage agreement itself.

As mentioned earlier, there are a few cases in which the evidentiary requirements have been relaxed. For example, the instrument evidencing the indebtedness is authentic evidence for the purpose of using executory process. Comments suggest that "the certificate of the secretary . . . of a building and loan association, certifying the amount of advances made to the borrower, shall constitute authentic evidence of this indebtedness."[22] Given this provision, if applicable here, such a certificate would provide authentic evidence of all three of the elements necessary to execute on an AML, alleviating practically any problem created by the floating interest rate of the AML which is unascertainable by authentic evidence. Because there is no federal law concerning enforcement of mortgages offered by federal associations, it is safe to say that there has been no federal preemption in this area. Therefore, the provisions in question are applicable to federal institutions by virtue of R.S. 6:901.

As noted above, the issuance of a collateral mortgage note in conjunction with the AML would also solve these problems. Cases interpreting the statutory requirement of authentic evidence have held it is permissible for lenders to submit a mortgage note as authentic evidence of the debt and its amount, while introducing the hand notes in conjunction with testimony at a hearing on this matter to establish the exact amount owed.

In conclusion, it must be remembered that the above discussion of the four questions raised for analysis, while it is to be hoped comprehensive, is nevertheless speculative.

Although the AML regulations are three years old, there seems to be little interest as yet in their legal aspects. There are no reported cases on point. The jurisprudence is silent also with respect to concepts analogous to the AML, such as Variable Rate and Renegotiable Rate mortgages. Thus, the problems with construing the new AML regulation and state law affecting AMLs still persist.

In light of the above considerations, the task of the researcher here has not been to find specific, immutable resolutions to the four issues in question. Instead, an attempt has been made here to apply the most consistent legal principles available to the unique AML situation. As noted above, application of antiquated provisions to the unique circumstances presented by the AML has not been easy. Still, every effort has been made to offer all possible viewpoints in the hope that the truth will somehow surface from an exhaustive treatment of each issue.

Further complicating matters is the possibility of future state legislation concerning AMLs and what effect such enactments would have on the regulations. A number of bills before the Louisiana legislature in the past few years would have, if passed, drastically changed any and/or all of the foregoing analysis.[23] These bills routinely fail to become law and are routinely reintroduced in subsequent sessions. The future of the legislation is still very much in doubt.

The reader will not be burdened here with a lengthy discussion of the implications of the proposed changes. Suffice it to say that these proposals represent a needed attempt to make the novel AML situation manageable by addressing statutory responses to the four questions presented here. Only time will tell whether the confused and speculative nature of this article will be rescued by sound legislation on the subject of AMLs.

FOOTNOTES

[1] *Time*, June 4, 1984.

[2] *Business Week*, May 21, 1984.

[3] 12 Code of Federal Regulations (C.F.R.) 545.6-4a(b).

[4] U.S. Constitution, Article VI, cl. 2.

[5] 12 C.F.R. 545.6-4(a)(2).

[6] 12 U.S. Code (U.S.C.) 1761 *et seq.*

[7] U.S. League of Savings Associations, *Management Bulletin*, April 30, 1981, p. 27.

[8] 46 Federal Register (F.R.) No. 83.

[9] La. Civil Code (C.C.) Art. 1939.

[10] 46 F.R. No. 83, note 1.

[11] See 12 C.F.R. 545.6-4(a)(2).

[12] La. C.C. Arts. 3292, 3293.

[13] Vetter, *The Validity and Ranking of Future Advance Mortgages in Louisiana*, 21 Loy. L.R. 141, 154-55 (1975).

[14] *Thrift Funds Canal, Inc. v. Foy*, 260 So.2d 628 (La. 1972).

[15] *Opinions of the Louisiana Attorney General* (1934).

[16] *Meyers v. Beverly Hills Federal S&L Assn.*, 499 F.2d 1146 (4th Cir. 1974).

[17] *State v. Coast Federal Savings & Loan Assn.*, 98 F. Supp. 311 (N.D. Co. 1951).

[18] Ibid.

[19] *Work of Appellate Courts, Security Devices*, 32 La. L.R. 233, 234 (n. 4) (1971).

[20] Comment, 22 Loy. L.R. 190 (1976).

[21] La. Code of Civil Procedure (C.C.P.) Art. 2635

[22] La. C.C.P. Art. 2636, comment (c).

[23] E.g., Louisiana House Bill (H.B.) 1689 (1981); H.B. 262 (1983); H.B. 452 (1982); and H.B. 450 (1982).

RECENT MERGER ACTIVITIES AS A CAUSE FOR CHANGES IN THE STRUCTURAL AND FINANCIAL CHARACTERISTICS OF THE SAVINGS AND LOAN INDUSTRY

*Theodor Kohers**

Introduction

Among financial institutions the thrift industry is probably the most sensitive to changes in market conditions. Especially in recent years have savings and loan associations experienced (1) declining earnings, (2) a sharp increase in the cost of funds, and (3) a pronounced erosion in their net worth position. These developments can be traced to problems typical of financial institutions with highly specialized asset-liability structures. In the case of the savings and loan associations the problem can be attributed to portfolios of long-term assets and short-term liabilities, regulatory barriers, and rising interest rates. The Federal Home Loan Bank Board, in an attempt to assist the thrift industry, has brought about many structural changes, the most recent having occurred as a result of the passage of the Depository Institutions Deregulation and Monetary Control Act (DIDMCA). Under this act the gradual phasing out of many regulatory barriers to many asset and liability markets already has intensified both inter- and intra-intermediary competition.

Furthermore, in direct response to the financial difficulties currently being experienced by many thrifts, regulators have rushed to facilitate mergers of weak institutions with sound ones. The total effects of this policy on the savings and loan industry are, as yet, unknown. Meanwhile, over the period from 1981 through 1982, the thrift industry, in terms of number of associations, has shrunk by 20.0 percent as a result of merger activities. Virtually all of these mergers were motivated by financial distress on the part of the acquired associations and recommended in order to prevent failure.

While a few previous studies (2, 3, and 4) have attempted to analyze the possible effects of mergers on the thrift industry, these studies are so outdated that their findings are not applicable to current conditions and circumstances. In this article an attempt is made to determine the extent to which the recent record number of mergers which took place during 1981 and 1982 might have contributed to changes in the savings and loan industry.

More specifically, the objective of this research was to analyze the effect recent mergers may have had on the thrift industry. This was accomplished by examining the changes that took place in the industry over the period from December 31, 1980 through December 31, 1982 in terms of (a) type of ownership, (b) type of charter, (c) size of association, and (d) major financial characteristics which are likely to be attributable to merger activities. Regulatory authorities should find the results particularly useful in the supervision of savings and loan associations.

The next section of this article contains a description of the research data and methodology, followed by a presentation of the results of the empirical analysis. Finally, in the last section the implications of the results are discussed.

Research Data and Methodology

The data for the savings and loan associations were obtained from the data base of semi-annual financial reports filed with the Federal Home Loan Bank Board. A set of financial ratios was computed from the financial statements (a) as of December 31, 1980 for all associations that were engaged in mergers, that is acquiring and acquired, during 1981 and 1982, and (b) as of December 31, 1980 and 1982 for all thrifts that made up the industry during those years. For a complete list of the variables used in this research, refer to Table 1.

The composition of the industry at year-end 1980 with regard to the characteristics identified in Table 1 was compared with that of the industry as of year-end 1982, and any observed changes were reported. It should be noted here that no statistical application to test whether there were statistically discernible changes in variables over the 1980-1982 time span was necessary since the whole population, that is the entire savings and loan industry, was included in the research.

Any changes which took place in the industry during this two-year period could be due to a host of factors, such as existing economic conditions and the phasing-in of the

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Table 1
DESCRIPTION OF FINANCIAL CHARACTERISTICS OF SAVINGS AND LOAN ASSOCIATIONS INCLUDED IN THE ANALYSIS AND HYPOTHESIZED RELATIONSHIPS BETWEEN ACQUIRING AND ACQUIRED ASSOCIATIONS

Variables		Hypothesized Relationship
	I. Asset Portfolio	
A 01:	Single-Family Mortgage Loans/Total Mortgage Loans	-
A 02:	VA-FHA-HUD Mortgage Loans/Total Mortgage Loans	+
A 03:	Two- to Four-Family-Unit Mortgage Loans/Total Mortgage Loans	+
A 04:	Over Four-Family-Unit Mortgage Loans/Total Mortgage Loans	+
A 05:	Conventional Mortgage Loans/Total Mortgage Loans	+
A 06:	Non-conforming Loans and Contracts/Total Mortgage Loans	+
A 07:	Total Mortgage Loans/Total Assets	+
A 08:	Other Loans/Total Assets	+
A 09:	Real Estate Owned and in Judgment/Total Assets	+
A 10:	Net Fixed Assets/Total Assets	-
A 11:	Cash and Demand Deposits/Total Assets	-
A 12:	Cash, Demand Deposits, and Investment Securities/Total Assets	+
A 13:	Other Assets/Total Assets	+
A 14:	Size of Total Assets in Millions	+
	II. Liability Portfolio	
L 01:	Total Deposits/Total Assets	-
L 02:	FHLBB Advances/Total Assets	+
L 03:	Borrowings Other Than From FHLBB/Total Assets	+
L 04:	NOW Accounts/Total Deposits	+
L 05:	Passbook Accounts/Total Deposits	+
L 06:	Certificates of Deposits ($100,000 or more)/Total Deposits	+
L 07:	Other Accounts in Excess of the Regular Rate/Total Deposits	-
	III. Capital Position	
C 01:	Net Worth/Total Assets	+
C 02:	Net Worth/Total Deposits	+
	IV. Income Structure	
I 01:	Interest on Mortgage Loans/Total Mortgage Loans	-
I 02:	Interest on Mortgage Loans/Total Income	-
I 03:	Operating Income/Total Assets	+
I 04:	Income Before Taxes/Total Assets	+
I 05:	Net Income/Total Income	+
I 06:	Net Income/Net Worth	+
I 07:	Net Income/Total Assets	+
I 08:	Interest on Other Loans/Total Income	+
I 09:	Interest on Other Loans/Other Loans	+
I 10:	Income on Investments and Deposits/Total Income	+
I 11:	Loan Fees and Other Charges/Total Income	+
I 12:	Loan Fees/Total Loans	+
I 13:	Net Income From Service Corporations and Subsidiaries/Total Income	+
I 14:	Non-operating Income/Total Income	+
	V. Expense Structure	
E 01:	Personnel Compensation and Directors' Fees/Operating Expenses	-
E 02:	Personnel Compensation and Directors' Fees/Total Deposits	-
E 03:	Advertising Expenses/Operating Expenses	+
E 04:	Advertising Expenses/Total Deposits	+
E 05:	Occupancy Expenses/Operating Expenses	-
E 06:	Occupancy Expenses/Total Deposits	-
E 07:	Deposit Interest/Operating Income	-
E 08:	Deposit Interest/Total Deposits	-
E 09:	Operating Expenses/Operating Income	-
E 10:	Operating Expenses/Total Assets	-
E 11:	Total Cost of Funds/Total Liabilities	-
	VI. Miscellaneous	
M 01:	Spread I: (Interest on Loans and Investment Income/Total Assets) minus (Total Cost of Funds/Total Liabilities)	+
M 02:	Spread II: (Interest on Mortgage Loans/Total Mortgage Loans) minus (Deposit Interest/Total Deposits)	+
M 03:	Average Conventional Mortgage Size: Total Conventional Mortgage Loans/Total Number of Conventional Mortgage Loans	+
M 04:	Overall Average Mortgage Size: Total Mortgage Loans/Total Number of Mortgage Loans	+
M 05:	Number of Accounts in Excess of $100,000/Total Number of Deposit Accounts	+
M 06:	Average Deposit Account Size: Total Deposits/Total Number of Deposit Accounts	+
M 07:	Amount of Participations Sold/Total Assets	+
M 08:	Amount of Participations Purchased/Total Assets	+
M 09:	Whole Loans Sold/Total Assets	+
M 10:	Whole Loans Purchased/Total Assets	+
M 11:	Loans Serviced for Others/Total Assets	+
M 12:	Broker-Originated Savings/Total Deposits	+
M 13:	Type of Savings and Loan Association: 0 = Stock 1 = Mutual	+
M 14:	Type of Charter: 0 = State, 1 = Federal	+

NOTE: (+) implies that the variable is hypothesized to be higher for acquiring associations.
(-) implies that the variable is hypothesized to be lower for acquiring associations.

Depository Institutions Deregulation and Monetary Control Act. Furthermore, it can be reasoned that because of the record number of merger activities which took place during this time, mergers might be a major factor in explaining the observed changes in industry characteristics over the same time. More specifically, the 774 savings and loan associations which were acquired by other thrifts caused the industry to shrink by 20.0 percent between 1980 and 1982, that is, 774 acquired associations relative to a total population of 3,956 savings and loan associations at year-end 1980. If the acquired (disappearing) thrifts exhibited significantly different characteristics relative to the acquiring (remaining) associations, then it is likely that the whole industry changed as a result of the merger activities.

In order to detect possible differences in financial characteristics, each of the acquiring associations is paired with its respective acquired association in terms of each of the variables listed in Table 1. The results reveal in which categories there were differences that may have contributed to changes in industry characteristics. Here, too, no statistical application to test for discernible differences in variables between acquiring and acquired associations was necessary since the whole population, that is all savings and loan associations which were engaged in mergers during the 1981-1982 period, was included.

Many of the differences in financial characteristics expected to be found between acquiring and acquired associations are due to size discrepancies between the thrifts. As shown by Benston (1), Brigham and Pettit (3), and others, economies of scale appear to exist in the thrift industry; thus, larger associations are able to decrease per unit output costs as they grow. Futhermore, the diversification of an association's asset portfolio, which according to Sharpe (5) and others contributes to the maximization of firm value, is more practical as the size of the assets increases. On the other hand, unique relationships may exist between the acquiring and the acquired association which may run counter to the general relationships.

Table 1 contains a summary of the assumed financial characteristics relationships between acquiring and acquired thrifts. When reviewing these relationships, one should remember that virtually all of the mergers that took place during the 1981-1982 period were motivated by financial distress on the part of the acquired association. Therefore, the typical merger during this time involved a financially weak thrift being absorbed by a financially sound association so as to prevent the failure of the former. Consequently, the following relationships are hypothesized to exist:

1. Asset Portfolio: Acquiring associations are larger and are more diversified compared to their acquired counterparts.
2. Liability Portfolio: Acquiring associations are more willing and able to borrow and obtain funds from a greater variety of sources compared to the acquired associations.
3. Capital Position: Acquiring associations have a better capital position relative to acquired thrifts. This relationship is obvious since the rapidly eroding net worth position of many associations resulted in their merger.
4. Income Structure: Acquiring associations are more profitable than acquired thrifts.
5. Expense Structure: Acquiring associations have relatively fewer costs than acquired thrifts.
6. Miscellaneous: The variable relationships M 01 through M 12 are all expected to be higher for the acquiring associations because they are assumed to be larger, more profitable, more diversified in both their asset and liability portfolio, more flexible, and they can respond more readily to changes than acquired associations. For Variable M 13 it was assumed that, on balance, more mutual associations acquired smaller stock associations. For Variable M 14 it was assumed that more federal thrifts acquired state-chartered associations.

Results

The major financial characteristics of the savings and loan industry, as they existed as of year-end 1980 and 1982, and the changes that took place over this time period are revealed in Table 2. For example, Variable A 01 (the ratio of Single-Family Mortgage Loans/Total Mortgage Loans) in 1980 amounted to 0.779 for the industry, with a standard deviation of 0.131. The comparable figures for 1982 were 0.724 and 0.178, respectively. Thus, between 1980 and 1982, savings and loan associations, on average, reduced their investments in single-family mortgage loans by 0.055, or 7.1 percent, relative to 1980. In order to determine if part of this change could be attributed to merger activities in the industry, the results of the paired-difference comparison will be examined. First, however, the results of Table 2 will be reviewed.

Changes in Industry Characteristics, 1980-1982

As far as the asset structure is concerned, there were major increases in Variables A 13 (Other Assets/Total Assets) and A 09 (Real Estate Owned and in Judgment/Total Assets), suggesting a move toward greater diversification in the industry. Also, Variables A 11 (Cash and Demand Deposits/Total Assets) and A 12 (Cash, Demand Deposits, and Investment Securities/Total Assets) showed major percentage increases, indicating an improvement in the industry's liquidity position. Most of the other variables examined in the asset portfolio showed relatively small changes between 1980 and 1982, which from a practical point of view probably could be considered insignificant.

The variable that stands out in the liability portfolio is L 04 (NOW Accounts/Total Deposits), which rose by over 1,000.0 percent. Also, thrifts relied more heavily on borrowings from sources other than the Federal Home Loan Bank Board (Variable L 03), which increased by 80.0

Table 2
STATISTICAL DESCRIPTION OF MAJOR FINANCIAL CHARACTERISTICS
OF THE SAVINGS AND LOAN INDUSTRY
1980 AND 1982

Variable #	Mean		Standard Deviation		Change 1982-1980	% Change 1980-82
	1980	1982	1980	1982		
I. Asset Portfolio						
A 01	0.779	0.724	0.131	0.178	- 0.055	- 7.1
A 02	0.037	0.032	0.075	0.071	- 0.005	- 13.5
A 03	0.045	0.044	0.059	0.058	- 0.001	- 2.2
A 04	0.043	0.044	0.050	0.054	0.001	2.3
A 05	0.912	0.869	0.131	0.177	- 0.043	- 4.7
A 06	0.001	0.001	0.004	0.003	0	0
A 07	0.829	0.791	0.084	0.151	- 0.038	- 4.6
A 08	0.031	0.034	0.030	0.042	0.003	9.7
A 09	0.002	0.004	0.004	0.007	0.002	100.0
A 10	0.014	0.015	0.011	0.011	0.001	7.1
A 11	0.014	0.024	0.024	0.035	0.010	71.4
A 12	0.098	0.115	0.063	0.082	0.017	17.4
A 13	0.015	0.031	0.011	0.040	0.016	106.7
A 14	155.486	206.429	456.528	655.635	50.943	32.8

(continued)

Table 2 (continued)

Variable #	Mean		Standard Deviation		Change	% Change
	1980	1982	1980	1982	1982-1980	1980-82
II. Liability Portfolio						
L 01	0.856	0.854	0.075	0.137	- 0.002	- 0.2
L 02	0.045	0.046	0.048	0.061	0.001	2.2
L 03	0.010	0.018	0.023	0.037	0.008	80.0
L 04	0.002	0.024	0.007	0.031	0.022	1,100.0
L 05	0.215	0.186	0.107	0.103	- 0.029	- 13.5
L 06	0.052	0.086	0.080	0.143	0.034	65.4
L 07	0.729	0.686	0.125	0.181	- 0.043	- 5.9
III. Capital Position						
C 01	0.060	0.048	0.036	0.040	- 0.012	- 20.0
C 02	0.072	0.058	0.060	0.075	- 0.014	- 19.5
IV. Income Structure						
I 01	0.083	0.091	0.011	0.030	0.008	9.6
I 02	0.755	0.694	0.112	0.141	- 0.061	- 8.1
I 03	0.091	0.103	0.008	0.024	0.012	13.2
I 04	0.002	- 0.008	0.006	0.014	- 0.010	- 500.0
I 05	0.016	- 0.064	0.056	0.116	- 0.080	- 500.0
I 06	0.005	- 0.181	0.256	0.763	- 0.186	- 3,720.0
I 07	0.002	- 0.006	0.005	0.013	- 0.008	- 400.0
I 08	0.031	0.038	0.031	0.044	0.007	22.6
I 09	0.092	0.128	0.032	0.070	0.036	39.1
I 10	0.121	0.136	0.081	0.101	0.015	12.4
I 11	0.036	0.035	0.031	0.040	- 0.001	- 2.8
I 12	0.004	0.005	0.004	0.006	0.001	25.0
I 13	0.002	0.004	0.009	0.017	0.002	100.0
I 14	0.009	0.026	0.024	0.047	0.017	188.9
V. Expense Structure						
E 01	0.513	0.489	0.065	0.074	- 0.024	- 4.7
E 02	0.009	0.009	0.005	0.006	0	0
E 03	0.064	0.056	0.034	0.036	- 0.008	- 12.5
E 04	0.001	0.001	0.001	0.001	0	0
E 05	0.185	0.202	0.053	0.058	0.017	9.2
E 06	0.003	0.003	0.002	0.002	0	0
E 07	0.759	0.867	0.079	0.137	0.108	14.2
E 08	0.080	0.102	0.008	0.026	0.012	27.5
E 09	0.160	0.155	0.064	0.068	- 0.005	- 3.1
E 10	0.015	0.016	0.006	0.009	0.001	6.7
E 11	0.079	0.101	0.008	0.026	0.022	27.8
VI. Miscellaneous						
M 01	0.007	- 0.004	0.006	0.010	- 0.011	- 57.1
M 02	0.003	- 0.011	0.010	0.017	- 0.014	- 466.7
M 03	27976.915	31969.359	10544.651	25690.001	3,992.444	14.3
M 04	28898.450	34763.552	11305.268	29260.036	5,865.102	20.3
M 05	0.002	0.005	0.003	0.017	0.003	150.0
M 06	5290.706	3963.282	2104.050	3963.282	1,327.424	74.9
M 07	0.011	0.023	0.058	0.082	0.012	109.1
M 08	0.009	0.015	0.026	0.060	0.006	66.7
M 09	0.012	0.019	0.081	0.114	0.007	58.3
M 10	0.007	0.011	0.053	0.055	0.004	57.1
M 11	0.075	0.092	0.383	0.400	0.017	22.7
M 12	0.002	0.018	0.021	0.098	0.016	800.0
M 13	0.810	0.778	0.392	0.416	- 0.032	- 4.0
M 14	0.500	0.519	0.500	0.500	0.019	3.8

Total Sample Size: 1980 = 3,956 S&Ls = total S&L population.
1982 = 3,323 S&Ls = total S&L population.

percent. Furthermore, certificates of deposit of $100,000 or more (Variable L 06) showed an increase of 65.0 percent.

The capital position of savings and loan associations over the period examined continued to deteriorate. While the Net Worth/Total Assets ratio (Variable C 01) in 1980 was still 6.0 percent, it had dropped to 4.8 percent by year-end 1982, a decrease of 20.0 percent.

Although there were some bright spots in the income structure in 1982, all of the key measures of profitability, such as I 07 (Net Income/Total Assets), I 06 (Net Income/Net Worth), I 05 (Net Income/Total Income), and I 04 (Income Before Taxes/Total Assets), showed major declines relative to what they were in 1980. In addition, some of the expense variables which rose noticeably over the two-year period included Variables E 11 (Total Cost of Funds/Total Liabilities) and E 08 (Deposit Interest/Total Deposits), each by 27.0 percent.

Most of the variables listed under "Miscellaneous" showed large percentage changes from 1980 to 1982. For example, both measures of spread (Variables M 01 and M 02) declined noticeably. It is interesting to note that in 1982 both measures of spread were negative, indicating that the cost of the sources of funds to thrifts exceeded the returns on the uses of these funds. The negative spread was especially pronounced for Variable M 02 ((Interest on Mortgage Loans/Total Mortgage Loans) minus (Deposit Interest/Total Deposits)), suggesting that interest paid out for deposits exceeded interest earned on mortgages by a considerable margin.

Variables M 03 through M 12 increased substantially over the period examined. There was a small decrease in the proportion of associations organized as mutuals (in 1980, 81.0 percent of all thrifts were mutuals; in 1982, that proportion dropped to 77.8 percent). Also, there was a slight increase in the proportion of federal associations relative to those that were state-chartered. In 1980, exactly half of all savings and loan associations were federal; as of year-end 1982, that number had gone up to 51.9 percent.

The Role of Merger Activities in a Changing Industry

The next step was to determine if part of the changes that had taken place in the industry over the two-year period could be attributed to the large scale merger activities that had occurred over the same time span. To accomplish this the results of the paired comparison were examined. Table 3 shows (a) the differences in the pre-merger financial characteristics of acquiring associations relative to their acquired counterparts, and (b) the relationship between the mean differences of acquiring and acquired thrifts to their respective industry averages. A mean difference of zero between acquiring and acquired associations implies no difference in financial characteristics between these two types of associations, and, consequently, the subsequent elimination through merger of the acquired thrifts will have no effect on the financial characteristics of the remaining industry. However, the greater the differences from zero, the greater the likelihood that the acquiring (i. e., remaining) associations caused the industry's financial characteristics to change.

For example, Table 3 indicates that acquiring thrifts, on average, were significantly larger in terms of total assets (Variable A 14) compared to the acquired associations. In fact, the average acquiring savings and loan association of 1980 was over 400.0 percent larger than the industry's average association of that year. Therefore, it can be concluded that merger activities taking place during 1981-1982 contributed to the increase in average association size from $155 million in 1980 to $206 million in 1982 (see Table 2).

Table 3

DIFFERENCES IN THE PRE-MERGER FINANCIAL CHARACTERISTICS OF ACQUIRING SAVINGS AND LOAN ASSOCIATIONS RELATIVE TO THEIR ACQUIRED COUNTERPARTS AS OF DECEMBER 31, 1980

Variable #	Mean Difference (Acquiring - Acquired)	Standard Deviation	Percentage Difference: Mean Difference/Industry Mean
I. Asset Portfolio			
A 01	- 0.0214	0.1491	- 2.8
A 02	0.0135	0.0773	36.5
A 03	- 0.0028	0.0665	- 6.2
A 04	0.0186	0.0626	43.3
A 05	- 0.0040	0.1289	- 0.4
A 06	0.0050	0.0047	500.0
A 07	0.0033	0.0798	0.4
A 08	0.0008	0.0377	2.6
A 09	- 0.0003	0.0055	- 15.0
A 10	0.0000	0.0117	0
A 11	- 0.0036	0.0209	- 25.7
A 12	- 0.0078	0.0633	- 8.0
A 13	0.0025	0.0165	16.7
A 14	665.3671	1717.3446	427.9
II. Liability Portfolio			
L 01	- 0.0299	0.0797	- 3.5
L 02	0.0118	0.0626	26.2
L 03	0.0037	0.0337	37.0
L 04	0.0007	0.0045	35.0
L 05	0.0117	0.0817	5.4
L 06	0.0028	0.0958	5.4
L 07	- 0.0148	0.1085	- 2.0
III. Capital Position			
C 01	0.0076	0.0315	12.7
C 02	0.0111	0.0424	15.4
IV. Income Structure			
I 01	- 0.0003	0.0112	- 0.4

(continued)

Table 3 (continued)

Variable #	Mean Difference (Acquiring - Acquired)	Standard Deviation	Percentage Difference: Mean Difference/Industry Mean
I 02	0.0037	0.1183	0.5
I 03	- 0.0007	0.0085	- 0.8
I 04	0.0035	0.0085	175.0
I 05	0.0328	0.0754	205.0
I 06	0.0514	0.8651	1,028.0
I 07	0.0031	0.0076	155.0
I 08	0.0026	0.0386	8.4
I 09	0.0032	0.0385	3.5
I 10	- 0.0072	0.0775	- 6.0
I 11	0.0033	0.0312	9.2
I 12	0.0003	0.0040	7.5
I 13	0.0026	0.0184	130.0
I 14	0.0038	0.0475	42.2
V. Expense Structure			
E 01	- 0.0023	0.0693	- 0.4
E 02	- 0.0003	0.0041	- 3.3
E 03	0.0150	0.0458	23.4
E 04	0.0002	0.0011	20.0
E 05	0.0019	0.0642	1.0
E 06	- 0.0002	0.0017	- 6.7
E 07	- 0.0317	0.0867	- 4.2
E 08	- 0.0012	0.0078	- 15.0
E 09	- 0.0097	0.0653	- 6.1
E 10	- 0.0010	0.0062	- 6.7
E 11	- 0.0020	0.0082	- 2.5
VI. Miscellaneous			
M 01	0.0008	0.0060	11.4
M 02	0.0009	0.0102	30.0
M 03	3981.7321	12610.4221	14.2
M 04	2853.6658	13258.2911	9.9
M 05	- 0.0001	0.0036	- 5.0
M 06	57.6112	1697.4728	1.1
M 07	0.0042	0.0625	38.2
M 08	0.0051	0.0350	56.7
M 09	0.0029	0.1481	24.2
M 10	- 0.0027	0.0725	- 38.6
M 11	0.0362	0.5579	48.3
M 12	0.0006	0.0287	30.0
M 13	0.0258	0.3083	3.2
M 14	0.1034	0.5258	20.7

Sample Size: 774 pairs of mergers = total population of S&L mergers.

Another major difference in the asset portfolio (Table 3) between acquiring and acquired associations was found to occur with Variable A 06 (Non-conforming Loans and Contracts/Total Mortgage Loans), where the mean difference was 500.0 percent higher for acquiring associations compared to the average thrift. However, Table 2 indicates that there was no change in this variable for the industry as a whole. This suggests that if the acquired thrifts had not merged, the industry average for this variable might have dropped over this time period.

In the liability portfolio (Table 3) it appears that Variables L 03 (Borrowings Other Than From FHLBB/ Total Assets), L 04 (NOW Accounts/Total Deposits), and L 02 (FHLBB Advances/Total Assets) were partly responsible for the increases in these respective variables for the industry (see Table 2).

The acquiring associations' capital positions (Table 3) were noticeably higher compared to their acquired counterparts, a fact which may have kept the industry's average from sliding even more (see Table 2).

The key variables in the income structure (Table 3) , i.e., I 06 (Net Income/Net Worth), I 07 (Net Income/Total Assets), I 04 (Income Before Taxes/Total Assets), and I 05 (Net Income/Total Income) all show significantly higher values for acquiring thrifts compared to the acquired ones. Here, too, one could reason that the drop which took place in these profitability ratios for the industry as a whole (see Table 2) would have been much worse if it had not been for the mergers. Also, the positive change in Variables I 13 (Net Income From Service Corporations and Subsidiaries/ Total Income) and I 14 (Non-operating Income/Total Income) for the industry can be partly attributed to the significantly higher values for these ratios for acquiring associations relative to the merged ones.

There were no major differences between acquiring and acquired savings and loan associations in the cost structure (see Table 3). With the possible exceptions of Variables E 03 (Advertising Expenses/Operating Expenses) and E 04

(Advertising Expenses/Total Deposits), the merger activities did not appear to have materially affected expense ratios of the industry.

There were several ratios in the "Miscellaneous" category which turned out to be higher for acquiring associations (see Table 3) and thus may have contributed to an improvement in these ratios for the entire industry. These ratios included M 08 (Amount of Participations Purchased/Total Assets), M 11 (Loans Serviced for Others/Total Assets), M 07 (Amount of Participations Sold/Total Assets), and M 02 ((Interest on Mortgage Loans/Total Mortgage Loans) minus (Total Cost of Funds/Total Liabilities)).

Finally, considerably more of the acquiring associations had a federal charter, that is, more of the acquired thrifts had a state charter, a fact which contributed to a slight increase in the proportion of federal- versus state- chartered savings and loan associations for the whole industry (see Table 2).

Conclusion

In this article an examination of the possible impact of the record number of merger activities of savings and loan associations during the past two years on the remaining industry was conducted. For the most part these mergers were necessitated to prevent failure when many thrifts incurred major losses which resulted in rapidly dwindling net worth positions and subsequently these financially weak associations were absorbed by typically larger and financially stronger thrifts.

In this article some evidence was provided that, on balance, the significant consolidation of associations within the thrift industry through mergers has had a positive impact on the remaining industry in terms of the financial characteristics examined. The acquiring (surviving) thrifts typically exhibited financial ratios which were clearly more desirable than those of the acquired (disappearing) associations. Therefore, the recent merger trend can be considered to have contributed to an improvement of the industry.

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CONTINGENCY FEES AND MEDICAL MALPRACTICE

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Introduction

The legal profession's compensation is, in large part, based upon the number of hours that the attorney expends on providing services to his client.[1] This pricing scheme is acceptable to the client when it can be shown that the total value of an attorney's services is a positive function of the number of hours he spends on a case.[2] An important exception, which is the rule in medical malpractice and other personal injury cases, is the contingency fee. Under this arrangement the plaintiff's attorney receives some agreed-upon proportion or percentage of the return he generates for his client.[3] When the return is zero, the attorney receives no fee irrespective of the hours worked.[4] Conversely, when the return is large, it has been estimated that the attorney receives as much as forty percent of this return although the number of hours worked is unknown to the client.[5]

The arguments for the use of a percentage or contingency fee method of payment are elementary and therefore, to most observers, compelling.[6] When the legal effort required to determine the defendant's liability and the plaintiff's loss is relatively time-consuming and, at the same time, the probability of a favorable outcome for the plaintiff is less than one, the cost of legal services is an impediment to the plaintiff's pursuit of the loss sustained. Suppose the plaintiff has a claim of $100,000 and the probability of an award in this same amount is one (1) if an attorney is retained.[7] Further, suppose the claim is the plaintiff's only means of financing the cost of litigation.[8] A lending institution would not hesitate to underwrite the plaintiff's legal fee up to the amount of $100,000.[9] This sum of money could be easily borrowed against the claim as collateral.[10] Suppose, however, the chance of winning is only ten percent. The expected value of the claim is $10,000 (.10 x 100,000), and it would appear a bank would be willing to lend the plaintiff this amount. But lending institutions are extremely risk averse and would not accept the gamble; one could not borrow the money necessary to press the claim.[11] The solution is a contingency fee arrangement. The lawyer advances his services and shares the risk of a zero award or settlement.[12] Risk is reduced if the plaintiff, who has only a single claim, can pool his claim with many other claims and the dispersion of the return to the lender—in this case the lawyer—is less than the dispersion of the return to an individual plaintiff.[13]

In addition to reducing risk and overcoming the problem of an imperfect capital market, the contingency fee insures that the quality of legal services is the same for plaintiffs as it is for defendants. Lawyers hired by insurance companies to defend against malpractice claims are almost always paid on an hourly basis.[14] One reason for the contrasting payment schemes is that the insurance company by virtue of a continuous arrangement and intermittent inspection of various cases can monitor the effort and productivity of its attorney.[15] The plaintiff will rarely have more than one claim in a lifetime and, therefore, no more than one transaction with his attorney.[16] As a result, the plaintiff is relatively uninformed with respect to the value of his claim, the amount of time and effort expended by his attorney, and the advisability of accepting a pretrial settlement or going to court. An efficient fee arrangement would compel the plaintiff's attorney to behave in exactly the same manner that a perfectly informed plaintiff would instruct him to behave. There should be no conflict with regard to the effort expended or the settlement accepted. The contingency fee as an incentive arrangement would appear to insure that this conflict does not take place.

For these reasons, the contingency fee system has been described by most plaintiffs' attorneys as more "equitable" than an hourly system. Unfortunately, no such description is possible for the economist. This does not mean that the arrangement is inequitable; a description of this sort simply rests on noneconomic criteria.

Equity considerations aside, a contingency fee compensation scheme will have allocative effects that differ from those that can be expected under an hourly fee arrangement. Further, microeconomic theory is primarily concerned with questions such as: How does the contingency fee influence the allocation or reallocation of society's resources to medical care and medical malpractice litigation?[17] The answer is reflected in two predictable and important ways.

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Specifically, when an attorney's compensation is contingent upon the settlement or award made: (1) Any increase in the expected value of a medical malpractice claim will increase the number of claims that are made.[18] It should not be surprising to find that a large number of the claims made have a low probability of winning. (2) There will be a conflict of interest between the plaintiff and his attorney.[19] An informed plaintiff will be willing to accept a pretrial offer of settlement which is less than that which is acceptable to his attorney.[20] It should not be surprising to find that most claims which go to court are won by defendants. This reallocation of resources which results from the contingency fee will be attractive or unattractive depending upon the identity of the evaluator. In medical malpractice cases, physicians can be expected to oppose contingency fees while the plaintiffs' bar can be expected to support the arrangement.

The Frequency and Severity of Malpractice Claims

It is not uncommon for physicians and their insurance companies to support a prohibition or limitation on the contingency fee which can be collected by the plaintiffs' bar.[21] Other things equal, they argue that restrictions on contingency fees will lower the number of claims made and decrease the average size of awards or settlements. The accomplishment of both of these results would be a difficult task.

In the absence of risk pooling the impact of abolishing the contingency fee is unclear. Suppose that injured patients were required to compensate their attorneys on an hourly basis. This change would shift the financial risk of losing the case to the plaintiffs, and they would be less inclined to make a claim.[22] The number of claims would fall. Attorneys, however, would not be required to win court cases or produce pretrial settlements in order to receive payment. Since the lawyer does not share the risk of a zero award or settlement, he would be more likely to accept those cases which he has a low probability of winning and the number of claims would increase.[23] The net effect on the number of claims is, therefore, ambiguous.

The average size of a malpractice claim may, however, decrease under the hourly fee arrangement.[24] Lawyers would have less incentive to accept large claims over small claims or pursue large claims more vigorously than small claims.[25] This does not mean that the total value of malpractice claims would decrease.[26] Although the average claim would be smaller, an increase in the number of claims may cause the total value of all claims to rise.[27] This ambiguity of results fails, however, to account for the risk pooling advantage enjoyed by the plaintiffs' bar.

Contingency Fees and the Decision to Litigate

When the expected value of a personal injury claim is increased, one does not anticipate that the number of claims made will be significantly altered. The number of claims made is usually a function of the number of accidents that take place. For example, in the most common of all personal injury cases, automobile accidents, we would not anticipate that large awards or a greater probability that the plaintiff will win would result in more accidents.[28] The reason for this is the transparent nature of the event.[29] In these cases it is immediately known that an accident has taken place, although placing the blame may require extensive litigation.[30] This rather trivial observation implies that most automobile accidents involving personal injury result in a claim.[31]

The major difference between automobile accidents and medical malpractice accidents is the complexity of medical care.[32] The patient cannot readily ascertain whether an unfavorable medical outcome is the result of malpractice or circumstances that could not be controlled by the physician.[33] Many hours of expert analysis and medical testimony may be required to establish that an accident occurred, and the discovery process is a costly one. There will exist some minimum value below which a malpractice claim will not be made, and this value will be a function of the method by which the plaintiff's attorney is paid.

Suppose that there are four plaintiffs each of whom is considering a personal injury claim against his physician. Let the minimum value of the plaintiff's attorney's time required to win any one of the four claims equal $10,000. Under an hourly fee arrangement, each plaintiff will compare the expected award to the expected cost prior to the decision to litigate.

Plaintiff Number	Amount of Claim	Probability of Win	Expected Value	Value of Attorney's Time	Expected Contingency Fee (40%)
1	$ 40,000	.05	$ 2,000	$10,000	$ 800
2	50,000	.10	5,000	10,000	2,000
3	100,000	.20	20,000	10,000	8,000
4	200,000	.30	60,000	10,000	24,000

Since the decision to litigate under an hourly fee arrangement rests solely with the plaintiff, claims number one and two will not be made. For plaintiff number one the expected value of $2,000 is insufficient to defray the certain cost of $10,000; only a claimant willing to risk the loss of $8,000 would be willing to pursue the claim. Similarly, the expected loss for plaintiff number two is $5,000. Plaintiffs number three and four enjoy a positive incentive of $10,000 and $50,000, respectively, and will pursue their claims.

When a contingency fee arrangement is employed, the decision to litigate must also be evaluated by the plaintiff's attorney who is asked to risk the value of his time. While claim number three is clearly attractive with an expected profit of $14,000, a plaintiff's attorney who is not completely risk averse may also agree to represent plaintiffs number two and three. The reason for this is risk pooling. When claims number two, three, and four are simultaneously evaluated, the total cost of the attorney's time is $30,000 and the expected value of the fee is $34,000. Claims number two and three can be financed with the expected profit on claim number four. A risk averse attorney would, of course, not be willing to accept claim number two or claim number three, as acceptance implies he must wager the expected profit of $14,000 on claim number four against the expected loss of $10,000 on claims number two and three. For the attorney who accepts the risk associated with claims two and three, expected profits decline to $4,000; however, should all three plaintiffs win, his total profit could equal $110,000. If the contingency fee method of payment is to provide plaintiffs two and three access to representation, their attorney must risk a total of $10,000 against the remote possibility of receiving the $110,000 fee.

When the expected value of awards is increased, the contingency fee may induce the attorney-entrepreneur to accept all four claims. Suppose that a change in the public's attitude toward physicians and injured patients results in a 100% increase in the probability of a plaintiff's win. The calculations are then,

Plaintiff Number	Amount of Claim	Probability of Win	Expected Value	Value of Attorney's Time	Expected Contingency Fee (40%)
1	$ 40,000	.10	$ 4,000	$10,000	$ 1,600
2	50,000	.20	10,000	10,000	4,000
3	100,000	.40	40,000	10,000	16,000
4	200,000	.60	120,000	10,000	48,000

Under an hourly fee method of payment, plaintiff number one expects a loss of $6,000, and plaintiff number two expects to break even. Neither of these plaintiffs has a pecuniary incentive to make a claim. Plaintiff number three expects a profit of $30,000, and plaintiff number four expects a profit of $110,000. Both of these latter plaintiffs will make a claim. When the contingency fee method of payment is employed, the attorney expects a total profit of $44,000 on claims three and four ($16,000 -$10,000 + $48,000 - $10,000) and will agree to take these cases. Claims number one and two, however, yield an expected loss of $14,400 ($1,600 - $10,000 + $4,000 - $10,000). The contingency fee arrangement will allow the attorney to finance claims one and two with the $48,000 in expected fees from claim number four. Should he choose to do so, he must accept a portfolio which has the lower expected profit of $29,600 ($44,000 - $14,400), but the possibility of $116,000 in profits if all four plaintiffs win. Claim number one, the additional claim, has the lowest probability of winning and the smallest amount of loss sustained. It is this type of claim that is often characterized as "frivolous" by the physician.

Conflict Between the Plaintiff and His Attorney

When an injured patient suspects but is not positive that his injury is the result of physician error, there is an immediate problem of "portfolio imbalance."[35] The initial owner of the claim—the patient—is endowed with an asset that is very risky to pursue. Since individuals are usually risk averse, they are eager to transfer part of their rights to this asset in exchange for a less risky asset. Additionally, malpractice claims are of little value without a lawyer, so the sale of some percentage of the claim to an attorney both eliminates for the plaintiff the risk of a lost fee and at the same time enhances the value of the claim.[36]

The attorney has two distinct advantages over the claimant. First, he can pool the claim with the other claims that he handles, while the claimant is not likely to possess more than one claim. Second, by virtue of his specialization in personal injury cases, he can better assess the value of any one claim. These two advantages place the attorney in direct conflict with his client.

The relatively uninformed client will have a propensity to follow the attorney's advice with respect to the acceptance or rejection of pretrial settlements. Even a well-informed client will be inclined to follow his attorney's advice when it is the attorney's fee that is also at risk. The problem for the claimant, however, is that the attorney's diverse portfolio—more than one case—induces him to accept fair gambles at exceptionally long odds.[37] Most of the malpractice cases that go to trial are relatively large, and the probability that the plaintiff will win is less than 50%.[38] One would not expect that a fully informed patient would risk his single chance of recovery at such large odds.[39] The dilemma for the seriously injured is compounded by the fact that a malpractice claim may be his single asset. The attorney has no such problem. This implies that as the trial date approaches, many offers are rejected by risk pooling plaintiffs' attorneys that would be accepted by risk averse plaintiffs.[40]

Summary

When compared to an hourly fee method of payment, the contingency fee is predicted to (1) increase the number of malpractice claims made; (2) increase the minimum settlement offer that the plaintiff's attorney will advise his client to accept; (3) increase the number of claims that go to trial. Limitations on contingency fees which were adopted by several states in the wake of the medical malpractice "crisis" should, if the above arguments are correct, have the opposite effects. Interestingly, empirical evidence has been supportive of the hypothesized results.[41] The most rigorous statistical model to date concludes that:

> Imposition of limits on contingent fees charged by plaintiff attorneys
> a) raises the portion of cases dropped from 43% to 48%
> b) cuts the average settlement by 9%
> c) reduces the share of cases going to verdict from 6.1% to 4.6%.[42]

While the statistics are tentative, the potential allocative effects are significant. An erosion of physician-patient relationships and the accompanying shift in society's propensity to seek remuneration for harm done, the payment of which implies medical negligence, has elevated malpractice to a prominent position on the physician's balance sheet. For the plaintiffs' bar, this shift in attitude is more propitious. Although a large proportion of malpractice claims results in no payment to the plaintiff and, therefore, a net loss to the attorney, and those claims which yield a large award require an extensive expenditure of the attorney's time, the potential return on investment

in this line of business is large and increasing. One should not be surprised to find the contingency fee method of payment continuing to be challenged most vigorously by the physician lobby and defended most vigorously by the plaintiffs' bar.

Footnotes

[1] Murray L. Schwartz and Daniel J. B. Mitchell, "An Economic Analysis of the Contingent Fee in Personal-Injury Litigation," *Stanford Law Review*, 22, June 1970, p. 1125.

[2] In most cases the function is positive and decreasing; that is, there is no assumption that the value of the last hour of attorney time purchased is equal to that of the first hour purchased.

[3] Schwartz and Mitchell, p. 1125.

[4] Ibid.

[5] M. W. Reder, "Medical Malpractice: An Economist's View," *American Bar Foundation Research Journal*, 2, 1976, p. 546.

[6] The most prevalent arrangement is for the attorney to receive a third of the pretrial settlement and forty percent of a court award. Stephen K. Dietz, Bruce C. Baird, and Laurance Berul, "The Medical Malpractice Legal System," *Appendix -Report of the Secretary's Commission on Medical Malpractice*, Department of Health Education and Welfare. Washington, D.C.: Government Printing Office, 1973, pp. 114-115. Commonwealth of Virginia, *Interim Report of the Commission to Study the Costs and Administration of Health Care Services to the Governor and The General Assembly of Virginia*, S. Doc. 29, 1976, p. 68; Melvin W. Reder, "Contingent Fees in Litigation with Special Reference to Medical Malpractice," in *The Economics of Medical Malpractice*, ed. Simon Rottenberg (Washington, D.C.: American Enterprise Institute, 1978), p. 214.

[7] Richard A. Posner, *Economic Analysis of Law*, 2nd Ed. (Boston: Little, Brown and Company, 1977), p. 448.

[8] Ibid.

[9] Ibid.

[10] Ibid.

[11] Ibid.

[12] This argument implies that attorneys are either less risk averse than lending institutions or due to their specialization in personal injury cases can better assess the risk involved. When the probability of winning is one, banks and plaintiff attorneys will behave in the same manner. At some probability of winning less than one but greater than zero, lending institutions withdraw from the market, and the plaintiff will rely on another source of venture captial.

[13] This is not to say the contingency fee is the most efficient way to reduce the risk associated with a zero award. Plaintiffs who purchase an insurance policy to cover their losses in the event of an adverse medical outcome can avoid the risk for the certain payment of an insurance premium.

[14] Reder, "Contingent Fees in Litigation," p. 220.

[15] Ibid.

[16] Ibid.

[17] The second major topic of microeconomic analysis is the distribution of resources. In the area of medical malpractice, this is a no less important issue and, in fact, gives rise to major misunderstandings. For example, it is often said that when malpractice insurance premiums rise as the direct result of large and frequent awards, the cost of medical care is increased. This, however, is not true.

[18] Jerry R. Green, "Medical Malpractice and the Propensity to Litigate," in *The Economics of Medical Malpractice*, ed. Simon Rottenberg (Washington, D.C.: American Enterprise Institute, 1978), p. 195.

[19] Reder, "Contingent Fees in Litigation," p. 229.

[20] Ibid.

[21] States that have adopted contingency fee limitations include Arizona, California, Delaware, Florida, Hawaii, Idaho, Indiana, Iowa, Kansas, Maryland, Nebraska, New York, Oregon, Pennsylvania, Tennessee, Washington, and Wisconsin. Patricia Munch Danzon, *The Frequency and Severity of Medical Malpractice* (Santa Monica, CA: Rand Corporation, 1982), p. 41.

[22] Stephen Shavell, "Theoretical Issues in Medical Malpractice," in *The Economics of Medical Malpractice*, ed. Simon Rottenberg (Washington, D.C.: American Enterprise Institute, 1978), p. 53.

[23] Ibid.

[24] Ibid.

[25] Ibid.

[26] Ibid.

[27] The premium for malpractice insurance is a function of the total amount paid, that is, frequency times severity. More frequent but less severe claims do not necessarily increase the cost of insurance.

[28] Green, p. 194.

[29] Ibid.

[30] Ibid.

[31] Ibid.

[32] Ibid.

[33] Ibid.

[34] The decision does not imply profit maximization. Presumably plaintiff attorneys are willing to accept the chance of losing $10,000 on two and three to receive the opportunity for a possible large settlement in these cases.

[35] Reder, "Contingent Fees in Litigation," p. 225.

[36] Ibid.

[37] Ibid., p. 226.

[38] Ibid., p. 227.

[39] Ibid.

[40] Ibid.

[41] Roger Feldman, "The Determinants of Medical Malpractice Incidents: Theory of Contingency Fees and Empirical Evidence," *Atlantic Economic Journal*.

[42] Patricia Munch Danzon and Lee A. Lillard, *The Resolution of Medical Malpractice Claims: Research Results and Policy Implications* (Santa Monica, CA: Rand Corporation, 1982), p. 26.

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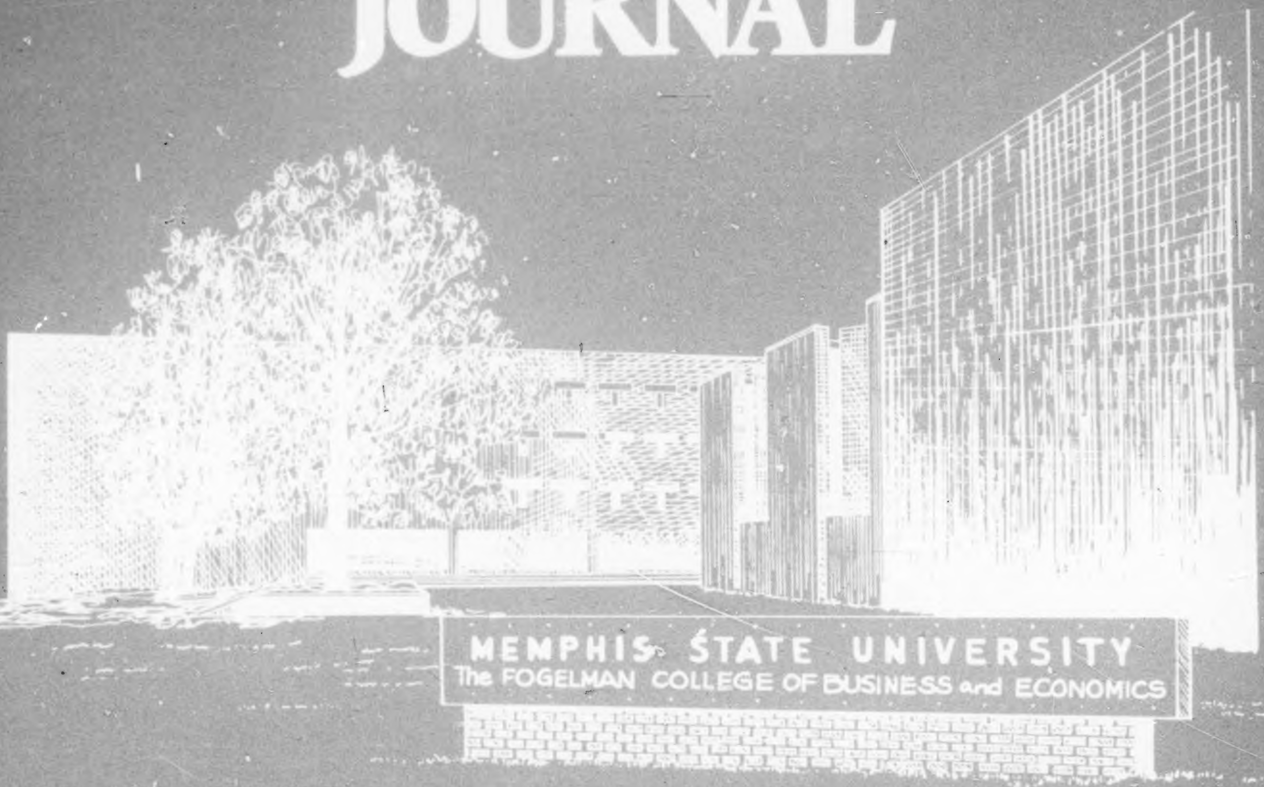
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MID-SOUTH BUSINESS JOURNAL

Volume V, Number 3

July 1985

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THIS PUBLICATION IS MADE POSSIBLE
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THE NATIONAL BANK OF COMMERCE
MEMPHIS, TENNESSEE

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The MID-SOUTH BUSINESS JOURNAL is published quarterly by the Bureau of Business and Economic Research, Memphis State University, Memphis, Tennessee 38152, in the months of January, April, July, and October, as a service to the business community. Second-class postage paid at Memphis, Tennessee. POSTMASTER: Send address changes to Bureau of Business and Economic Research, Memphis State University, Memphis, Tennessee 38152.

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EDUCATION AND ECONOMIC DEVELOPMENT: THE ARKANSAS EXPERIENCE

*C. W. Hubbard and L. M. Stafstrom**

In recent months, the U.S. economy has produced an economic scenario which has been welcomed, encouraging, and, indeed, downright exciting. Inflation rates have declined, and nominal interest rates have been receding gradually. Concurrently, personal incomes have risen, and employment has reached an all-time high. With more than 100 million people now employed, more Americans are working than ever before.

In a number of ways, states of the Mid-South region have participated in this economic resurgence. The challenge now, of course, is for leaders at all levels to take steps which will sustain and enhance the current economy. In increasing numbers of states the leadership has come to feel that improved education will promote prosperity. With this thought in mind, many have committed increased financial resources to education, while others have raised standards for both high school graduation and admission to state colleges and universities. One state is now even testing the competency of its public school teachers.

In most cases the collective leadership of education, business, and government has endorsed these educational improvements and has come to understand and to appreciate a long-standing truism: Economic progress is the natural offspring growing from the marriage of two fundamental factors—properly prepared human resources and econonmic opportunities.

In order to sharpen the focus on this concept, it would be helpful to investigate a regional example of the education/economic development interface. One interesting illustration of this interaction may be seen in the state of Arkansas. This state, as a result of recent legislative action, has begun to seriously address the education issue. It has raised taxes and earmarked the increased revenues for education, has raised various public school standards, and has initiated a highly publicized and controversial teacher testing program. The purpose of this article is to examine the Arkansas experience and its possible applicability to other Mid-South states. Initially, the concept of economic development is examined, followed by consideration of the economic development/education interface. Finally, suggestions are offered on what the business and education communities, working together, may do in order to better provide for economic development.

Certainly it is not suggested here that the Arkansas experience has universal applicability. What is suggested, however, is that, for any state, realistic and judiciously implemented improvements in the education system, properly endorsed and supported by the business community, offer real promise for overall enhancements of economic development and, thus, for the future quality of life.

Economic Development

By now the literature has been filled with examinations of the industries located within the "rust-belt" regions of the U.S. and either their demise or their migration to the "sun-belt." The decline of "smoke stack" industries and their replacement by "high-tech" is well documented. To be sure, the principal growth area both in terms of employment and overall economic development is high-tech. Virtually by definition, growth in high-tech will be, in the manufacturing sector, the future's principal provider of jobs—jobs which are critical to the economic stability and balance in many less well developed states. "Oregon, for example, is using the electronics invasion to diversify its employment base as the forest-products industry shrinks."[1]

As beneficial as it may be, the migration of high-tech to any specific area is in no way automatic. At any one time, there very well may be several thousand communities across the country vying for a single corporate headquarter's relocation or for the site selection and construction of a particular firm's newest production facility. Decisions on these locations may be based in no small part upon the availability of the "proper" type of personnel. "Pushed by *labor shortages* and mounting costs in northern California's 'Silicon Valley' and along Boston's Route 128, fast-growing semi-conductor and computer companies are accelerating a move of major facilities to distant locations."[2]

**The authors are, respectively, Associate Dean, Undergraduate Studies, and Assistant Director, Undergraduate Admissions, University of Arkansas, Fayetteville, Arkansas.*

The importance of the "personnel dimension" of economic development was stressed in a 1982 report prepared for the Joint Economic Committee of Congress. This report indicated that the single most significant factor influencing corporate site selections was undoubtedly the availability of workers—not just any kind of workers, however, but professional, technical, and skilled workers.[3]

This focus on personnel suggests that any geographic area under consideration must have the capacity to furnish the needed supply of professional talent. Additionally, it suggests that the educational system within that area must be able to deliver a continuing supply of that talent. Implicit here is that higher education enrollments within the area or state are stable and that funding for needed programs must be both sufficient and secure.

Education

The Quantity Declines!

Nationally, higher education experienced a tremendous rate of growth and change over the past twenty-five years. From the late 1950s through the 1970s, without much recruitment effort at all on the part of the nation's higher education institutions, enrollments grew rapidly. Political endorsement of the concept of access to higher education for everyone created opportunities for millions. As a result, increased attention was paid to the "non-traditional" segment of the student population (older students, minorities, and disadvantaged students). "Most institutions enjoyed the ultimate 'seller's' market . . . . The supply of good students was thought to be never-ending."[4]

However, the end of this growth era is here. Enrollments have begun to stabilize. Forecasts of decreases in enrollment through the 1990s are common, based on the accelerating decrease in the number of high school graduates. By and large, each year's college freshman class is drawn from the nation's pool of 18-year-old youths. In 1979, that group peaked at approximately 4.2 million, but will decrease approximately 20.0 percent by 1990. This trend toward a shrinkage of the pool of college-age youth is not forecasted to reverse itself in this century.[5] As can be seen, the seller's market has become a buyer's market.

The Quality Declines?

Not only is higher education facing the spectre of declining enrollments, the system is often indicted for declining quality as well. Declining standardized test scores have made the headlines. The National Institute of Education's report, "Involvement in Learning," called for drastic reform. The *New York Times* reports that colleges and universities, driven by increasing competition for fewer students, are becoming less selective, accepting applicants whose test scores and class standing would not have qualified them in the past.[6] As the buyer's market strengthens, will selectivity be less strict? "Unfortunately, educational issues are all too often based on economics—reluctance to increase requirements, for example, for fear of losing prospective students—rather than the more desirable educational considerations."[7]

Corporate Competition

In addition to a shrinking pool of the traditional college-age population and a public perception of declining quality, higher education is facing competition from business itself in the form of the "corporate classroom."

The corporate classroom is not, of course, a new concept. The General Motors Institute in Flint, Michigan, for example, is sixty-six years old. What is new is the growing size and support behind "education for the work place." It is currently estimated that an annual financial commitment approximating $40 billion (versus $60 billion for colleges and universities) is being made by U.S. corporations.[8]

According to one corporate executive, higher education is not meeting industry's needs: "As technology changes, universities tend to lag one to three years behind what's happening in the workplace."[9] This position was confirmed in a recently published report of the Carnegie Foundation for the Advancement of Teaching. This report indicates that, at a time when galloping technology can render an engineer's training obsolete within five years, "America's business has become its own educational provider." According to Carnegie President Ernest Boyer, the corporate classroom has quietly become "a kind of third leg of the educational system in the U.S."[10]

Is Arkansas Higher Education Any Different?

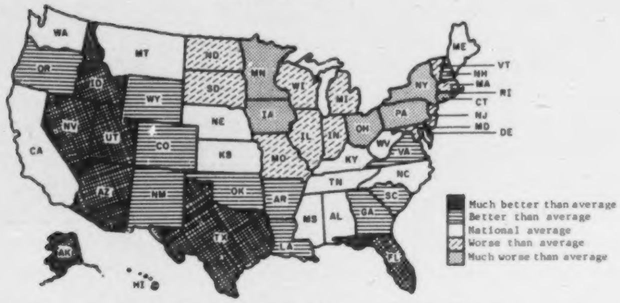
The nationwide demands for the trained professional work force required to foster economic development are also felt in Arkansas. This raises the following question regarding the state's higher education system and its ability to deliver essential personnel: Can Arkansas' four-year institutions meet the challenge of supplying the professionals required to attract new business investment to the state?

Demographically, Arkansas faces the same decline in the number of high school graduates as that expected nationally. Arkansas high school graduates peaked at 29,710 in 1981-82. The Arkansas Department of Higher Education projects a low of 23,669 in 1993-94, a decline of 20.0 percent, consistent with national figures.[11] The Carnegie Council, however, taking enrollment trends as well as external factors into account, projects Arkansas to have a smaller enrollment decline in the 1990s than the overall national average decline. (See Figure 1.)

In order to put the trends in higher education statistics in a more relatable perspective, recent enrollments at the University of Arkansas, Fayetteville (UAF) (the state's largest institution) were examined. As Figure 2 reflects, the numbers have gradually declined since 1980. According to figures furnished by the UAF Office of Institutional Research, UAF declined 3.6 percent in total enrollment in the fall of 1984, as compared to an increase of 0.4 percent nationally. In new freshmen, UAF declined only 1.0 percent, as opposed to a national decline of 2.6 percent.

Figure 1

Carnegie Council Projected Enrollment Trends in the 1990s Relative to the National Average Enrollment Decline

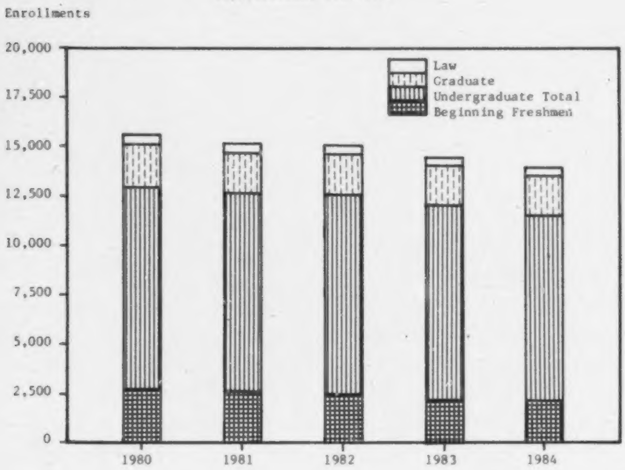


NOTE: Massachusetts is projected as worse than average for the public sector; average for the private sector.

Source: Carnegie Council on Policy Studies in Higher Education, 1980.

Figure 2

Fall Semester Total Enrollments, University of Arkansas, Fayetteville, 1980-1984



Source: University of Arkansas Fall 1984 Enrollment Summary, University of Arkansas, Office of Institutional Research, October, 1984, p. III.

Shifting patterns in the areas of academic interest at UAF echo the national trend toward professional schools versus liberal arts schools, as illustrated in Table 1. In one case (business administration), enrollment percentages have increased as much as 8.0 percent, while interest in liberal arts as measured by the number of students majoring in those fields has dropped a substantial 10.0 percent. These statistics reflect a response to increased employment opportunities. Again, they are, at least in part, a direct reflection of the increasing demand by high-tech economic development for professional, technical, and skilled workers.

The University of Arkansas also reflects the national trend in the shifts of women's professional and academic interests. The increased employment opportunities in industry created by consistent economic growth have aided in attracting female talent in increasing numbers, as Table 2 indicates. Women's enrollment in professional schools has risen, while their interest in such areas as education has waned. In the past decade, females have unquestionably seized the newly opened opportunities available to them and have begun to move away from the more traditional areas such as the arts and education.

Table 1
PERCENTAGE DISTRIBUTION OF UNDERGRADUATES BY COLLEGE, UNIVERSITY OF ARKANSAS-FAYETTEVILLE

College	Fall 1974	Fall 1979	Fall 1984
Agriculture and Home Economics	9	10	9
Architecture	3	2	3
Fulbright College of Arts and Sciences	40	33	30
Business Administration	21	27	29
Education	16	11	11
Engineering	9	14	15
Nursing	2	2	2

Source: *University of Arkansas Enrollment Statistical Report,* Fall 1974, Fall 1979, Fall 1984.

Table 2
PERCENTAGE ENROLLMENT DISTRIBUTION BY SEX AND COLLEGE, UNIVERSITY OF ARKANSAS-FAYETTEVILLE

	Fall 1974		Fall 1979		Fall 1984	
College	Male	Female	Male	Female	Male	Female
Undergraduates						
Agriculture and Home Economics	53	47	54	46	50	50
Architecture	94	6	87	13	80	20
Fulbright College of Arts and Sciences	55	45	51	49	49	51
Business Administration	76	24	66	34	60	40
Education	27	73	27	73	31	69
Engineering	96	4	89	11	87	13
Nursing	13	87	9	91	11	89
Graduate School	67	33	59	41	59	41
Law	87	13	83	17	72	28
Total	81	39	59	41	57	43

Source: *University of Arkansas Enrollment Statistical Report,* Fall 1974, Fall 1979, Fall 1984.

What May Be Done?

Being aware of some of both the present and future problems, attention should now be focused on possible solutions. Steps can be taken by Arkansas institutions to materially assist Arkansas' economic development.

Suggestion I: Education Must Don Its Marketing Hat!

It seems essential that colleges and universities throughout the state persist in their efforts to attract and educate capable young people; higher education simply must not lose sight of either its role or its responsibility as a supplier of talent to industry. Certainly, an important move in this direction would be for institutions to better focus on marketing strategies.

To be sure, this is *not* an article on higher education marketing. It must be noted, however, that as the potential student body becomes increasingly a buyer's market, Arkansas' colleges and universities must recognize their roles in a service industry. Industrial type marketing need not be adapted wholesale to the higher education system which, of course, is structured differently and which has philosophic goals and broad social obligations that preclude continually modifying programs to satisfy the ever-changing market place. Institutional leaders and policy makers must become aware that marketing is a combination of several strategies and, as such, involves the entire organization and not just the admissions office.

Marketing is not synonymous with selling. Slick publications and extensive recruiting efforts are only a part of the picture. Although proper promotion is important, a school's marketing efforts must go far beyond that. Marketing in higher education is a combination of several strategies such as planning, research, pricing (including financial aid policies), and program (product) development. A well conceived strategy beginning with an accurate identification of the market is mandatory. Simultaneously, schools must be aware that the students' selection of the college or university which they plan to attend involves a process. The key, of course, is to make the institution's marketing process effectively mesh with the student's selection process.

Suggestion II: Expand Higher Education Outreach Programs

Recent years have brought with them an explosion of knowledge, intensified world-wide competition, and incomparable technological advancements. Simultaneously, it seems, the skill levels of personnel already in the work force have rapidly tended to become antiquated. This professional obsolescence has been felt in numerous industries throughout the country, and it is doubtful that the Arkansas experience has been any exception. In view of these developments and in addition to attracting and training new talent, increasingly it seems only sensible that attention be focused on upgrading and invigorating the continuing education programs which higher education already has in place.

Granted, Arkansas universities generally and business schools specifically have periodically involved themselves in continuing education programs. These offerings have been beamed principally at "first-line" supervisory personnel, with less attention being paid to other levels within the corporate hierarchy. One such area is "small business." In the past, Arkansas' small business community has received substantial support from the Small Business Administration. Today, the future of the SBA itself is in jeopardy. Regardless of its fate, small business and entrepreneurship are truly important dimensions of the Arkansas business scene, need the state's financial backing, and need positive programs of advice and consultation. Higher education should expand and secure the programs that are essential to meeting these needs.

Also needed is a strengthened outreach program for middle and upper echelon management personnel. Today, Arkansas has only limited offerings for the development of its top management talent. Frequently, it is necessary for the state's executives to travel out of state in order to secure instruction in state-of-the-art management techniques. If improved economic development, especially of the high-tech variety, is to be experienced in Arkansas, it seems that *all* levels of management (including executives) should have easy access to a quality continuing education system. The state's business schools possess the needed instructional talent and the ability to deliver up-to-date management information. Steps must be taken soon to augment and to make readily available the needed development programs.

Simultaneously, the business community should be urged to take full advantage of these important industrial resources. Rather than enrolling in distant programs (often at much greater costs), business leaders should recognize the importance represented by their attendance at and participation in these programs.

What Does the Future Hold?

It is reasonably clear that the periods of rapid higher education growth are over. Thus, corporate recruiters and others who have routinely dipped into what they thought was an unending talent stream may find the level of that stream rapidly falling.

Enrollment is influenced not only by demographics, but by other factors as well. Certainly, the level of financial support which the government devotes to higher education will be significant. Presently, given the mood of the current administration, there is little to suggest that federal government allocations will greatly enhance higher education. "Virtually no area of the federal higher education budget—from student aid to library development grants to scientific research—has escaped the budget-cutting proposals that have swept through Washington since January 1981."[12]

At the state level, even though education in Arkansas has recently received a long-needed infusion of funds, many of these additional dollars will go to elementary and secondary levels, leaving too little for colleges and universities.

Concurrently, higher education will continue to be affected by a myriad of strictly non-budgetary issues. Such factors as the public's perception of higher education and its value (particularly important in Arkansas), the size and composition of future job markets, and the speed of economic expansion are but a few of these issues. Those interested in economic development who are expecting the higher education system to supply valuable human resources and thus play an integral role in that development must view the system with concern.

Conclusion

While many facets of the economic future may appear unclear, one is in plain view: High-tech economic development is the wave of the future and it belongs to those communities and to those firms which have people prepared to handle it. A properly prepared work force is likely to emerge only from an education system which has both sufficient prospective students and adequate financial backing.

Ultimately, the responsibility of supplying properly prepared human resources seems to rest principally on the states' programs of higher education, continuing education, and outreach. Through the aggressive expansion of these programs, states throughout the Mid-South region will be undertaking the best and quite possibly the only realistic answer to the question of personnel supply as they prepare to participate in the high-tech economic development of the future.

Footnotes

[1] "More Elbow Room for the Electronics Industry," *Business Week*, March 10, 1980, p. 97.

[2] Ibid., p. 94.

[3] "Quality Development in Higher Education to Meet the Future Needs of Arkansas," *Report of the Quality Higher Education Study Committee*, October, 1984, p. 11.

[4] Cliff Sjogren, "The Changing College Admissions Scene," *The Education Digest*, September, 1983, p. 28.

[5] William Ihlaufeldt, *Achieving Optimal Enrollment and Tuition Revenues*, Jossey-Bass Publications, 1980, p. 6.

[6] "Expect School Populations and Political Blocs to Shift in the Upcoming Decade," *Phi Delta Kappan*, Phi Delta Kappa, September, 1980, p. 3.

[7] Sjogren, p. 30.

[8] "Schooling for Survival," *Time*, February 11, 1985, p. 74.

[9] Ibid.

[10] Ibid.

[11] *Arkansas Public High School Graduates Projections to 1998-99*, Arkansas Department of Higher Education, May, 1984, p. 6.

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A THEORETICAL EXTENSION OF THE WELLS THEORY OF A PRODUCT LIFE CYCLE FOR INTERNATIONAL TRADE

*John O. King and Joseph H. Miller**

Introduction

The problems experienced by the United States automobile industry during the late 1970s and early 1980s as it found itself losing market share and profits to foreign competitors was a sobering experience for many Americans. Many citizens asked, "How did we get ourselves into such a situation after having dominated the world automobile market for decades?" This article will attempt to offer a theoretical explanation for this situation and expand upon relevant theory in the field of international trade.

Before looking at a theoretical explanation for the previously mentioned problems experienced by our automobile industry, we should take note of the fact that this is not the first United States industry to be severely damaged by the forces of world competition after having been a world leader. The full extent of the recent impact of world competition on American industry in foreign markets is shown by the fact that the United States had an $11.0 billion surplus in manufacturing trade in 1981 but experienced a $79.0 billion deficit in manufacturing trade in 1984 (Karmin & Black, 1985). Specific examples of affected industries include: shipbuilding, shoes, sewing machines, and electronic components. Certainly, this is not an all-inclusive list of American "has been" industries, but it is offered to remind readers that the only really new aspect of the problems experienced by the automobile industry is that it affects more workers, suppliers, customers, and investors.

The Wells Theory

While few theories offer a totally complete explanation of what occurs in the real world, the accuracy of a body of theory formalized by L. T. Wells in 1968 appears to be quite good. Wells does an excellent job of offering an argument favoring the existence of "a product life cycle theory for international trade" very much related to the product life cycle in marketing (Wells, 1968). This proposed theory is so good at explaining the reasons for the weakening international competitive position of many of our major industries that it should be required reading for all business executives and governmental officials.

The following is a brief explanation of the "product life cycle for international trade" as proposed by Wells:

1. Phase 1: *United States Export Strength.* This initial stage occurs when most of the domestic production problems have been solved, the product has become fairly standardized, and foreigners actually begin to seek the product.
2. Phase 2: *Foreign Production Begins.* This tends to occur when foreign markets become large enough to support foreign producers. Such producers often have lower costs than those of American producers because of the absence of tariffs, shorter distribution channels, lower product development costs, and lower labor costs.
3. Phase 3: *Foreign Production Becomes Competitive in Export Markets.* As foreign markets grow, foreign producers gain competitive cost advantages through economies of scale in production. When this is added to the lower labor costs experienced by many foreign producers, they often become dominant in major export markets.
4. Phase 4: *Import Competition Begins in the United States.* Since the United States represents one of the world's major markets, it is logical that the more efficient foreign producers with their lower labor costs and more modern factories will begin to move into major domestic markets.

Industry Problems

With our brief explanation of the Wells Theory behind us, we should now return to the original purpose of this article, namely the pursuit of a more complete theoretical explanation for the apparent inability of many American industries to compete in the world and, in some cases, domestic markets. The Wells Theory does not declare that this end is inevitable, but it does warn us of what to expect unless stringent steps are taken to alter, or postpone, the effects of the "life cycle for international trade."

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As previously mentioned, several major United States industries appear to have gone through all four phases of this theoretical life cycle, and others may be entering the fourth phase. For example, the United States aircraft industry is experiencing a declining market share in the commercial air transport plane and commuter plane markets outside the United States. A more advanced manifestation of the fourth phase of the "life cycle for international trade" appears to be developing in the farm equipment industry as we find foreign-made tractors and equipment making significant inroads in this industry, primarily aimed at the users of small machinery. Perhaps the best example is found in the American automobile industry where foreign competition has made a shambles of this once highly prosperous industry (Hampton, 1985).

A Proposed Fifth Phase

Proponents of the Wells Theory do not look with enthusiasm on the expectation that the fourth phase of the cycle has arrived in a given industry. This attitude should be expected because the beginning of intense import competition is normally a painful experience for a mature American industry. In the United States the common results of strong import competition are growing unemployment, declining tax revenues, deteriorating industry profits, bankruptcy of some of the less efficient firms, and increased political pressure for the government to intervene and save jobs as certain industries become casualties of the inflow of foreign products. Such conditions may even create conflict in the area of international relations and lead to tariffs, import quotas, and nationalistic-based appeals for consumers to "buy American." Again, the American automobile industry serves as a classic example in that the United States Government had pressured the Japanese into a form of quota system that functioned from 1981 to 1985 while American automobile manufacturers modernized and attempted to improve their overall efficiency. This arrangement officially ended on April 1, 1985, and the Japanese immediately announced plans to increase auto shipments to the United States by 450,000 units per year. This represents an increase of approximately 24 percent over the 1,850,000 units which the Japanese exported to the United States in 1984 (Hampton, 1985).

Just as the product life cycle for a product can be extended by such things as product improvements and finding new markets, we contend that the "product life cycle for international trade" does not end with Wells' fourth phase when import competition begins in the United States. Therefore, we propose a fifth phase entitled "United States Response to Foreign Import Competition."

Domestic response to foreign competition can take a variety of forms and degrees of effort. Specifically, we feel this response can be categorized into one of the following three areas:

1. *No Organized Response.* In such cases a variety of results are possible ranging from American industry collapse, such as occurred in the American television manufacturing industry when it was besieged by Japanese imports, to coexistence between domestic and foreign products in the American market.
2. *Organized Efforts to Restrict Imports.* In this situation we may find management, labor, and government working together to prevent additional inroads by foreign competition. This response may take the form of greater cooperation between labor and management and special treatment from the government in such forms as tariffs, quotas, or subsidies favoring domestic firms.
3. *Foreign Investment in American Industry.* This may take the form of joint ventures, the opening of foreign-owned production facilities in the United States, or foreign purchases of major ownership interests in American firms.

The Desired Response

Determining which of the previously mentioned responses is most desirable in a given situation is certainly subject to debate. However, we have taken the position that world economic and political conditions are such that the best long-run response for the American economy centers around encouraging foreign investment in affected American industries. The world conditions to which we refer are the growing importance of multinational firms in world business, increased financial resources available in other developed nations, a global improvement in both the quality and quantity of management talent, and a greater worldwide distribution of industrial technology.

The long-run benefits to which we refer include the following:

1. New technology will be brought into our depressed industries by the foreign investors which will speed up its rate of adoption and utilization by American firms.
2. The dollars invested by foreign firms will help ease our balance of payments problems and should reduce pressure on governmental officials to seek less acceptable solutions, such as a protective tariff.
3. Foreign investment will create jobs, increase tax revenues, and stimulate the overall American economy.
4. New management techniques brought into American industry by foreign investors will be assimilated into many of our domestic industries, contributing to greater productivity for the total economy.
5. A fifth benefit of foreign investment involves the fostering of better cultural relations between the United States and investing nations. This benefit is brought about by transfer and interaction among international management personnel, American workers, and the general public.

6. A final possible benefit of foreign investment in American industry is that it will lead to the rebirth of a stronger, more vibrant industry which will again have export strength even though it will be partially owned by foreign investors.

Summary and Conclusion

In this article we have attempted to expand and strengthen the Wells Theory of "a product life cycle for international trade." We have shown that the world economy has reached the stage where four phases are no longer an adequate explanation for what is occurring in the field of international trade. To strengthen the theory, we have proposed adding a fifth phase entitled "United States Response to Import Competition" and have shown the various forms this response is likely to take.

We conclude that the most desirable response to strong import competition is the encouragement of foreign investment in the affected United States industries. We also believe that this expanded body of theory not only explains what is likely to occur in major American industries that rely heavily on export marketing, but also what will likely occur in other highly developed economies where their domestic market represents a major market for the industry. The European automobile industry appears to be following the pattern predicted by the Wells Theory as they find themselves generally unprofitable and losing market share to Japanese firms whose 1984 European sales of one million units represented 10 percent of the total market (Hampton, 1985). The current European experience appears to agree with the findings of Ayal in which he concluded that the "life cycle for international trade" did not appear to be working in Israel primarily because Israel did not represent a market sufficiently large to attract major foreign competition for well established Israeli industries (Ayal, 1981).

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DEVELOPING NEW MODES OF WEATHERIZATION IMPLEMENTATION

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Energy conservation through weatherization has had a difficult initial period of consumer acceptance. Questions of consumer perference, problems of providing some energy users with costly subsidies, and issues of energy utility efficiency dominate the current energy debate. Incentives, information, and persuasion are all part of the bag of tools used by utility companies to encourage conservation while attempting to maintain a commitment to quality service levels for the average utility customer.

While energy conservation measures are usually viewed as cost effective for the consumer (because of low interest loans that result in lower utility bills) and a viable alternative to capacity expansion for the utility (because of the problems of construction and the potential of supply shortages), there has been a consistent problem of implementation of effective conservation programs. As Marvin Olsen notes, there is a problem of understanding the energy crisis and being able to cope with its costs: "Most people understand the essence of the energy problem. Belief in the reality of the energy crisis is fairly widespread. Most people have taken a few minimal conservation actions. [But] relatively few people have taken major conservation actions."

In addition to general awareness of a problem, a family's income level is one of the main determinants of consumer adoption of energy conservation packages. People with low to moderate incomes, for a number of reasons including the inability to pay, purchase fewer weatherization improvements. This article reviews an energy weatherization process developed for a low-income neighborhood in Memphis, Tennessee. This weatherization program employed a community intervention model to successfully enable residents of a low-income neighborhood to improve their participation in a weatherization program to the levels expected in middle-income residential areas. Unlike Alinsky-like community intervention programs that seek change through polarization between groups, this model sought to build a coalition of public agencies to work in collaboration with neighborhood-based groups.

Current Methods for Energy Conservation

The community intervention approach differs fundamentally from the two methods currently used by most other conservation and weatherization programs. The most popular method is to provide incentives through the price system. Rewards and punishments in the form of subsidized weatherization programs or higher utility prices provide the incentives to the consumer to change consumption patterns. Higher utility prices do bring lower use of energy resources. However, the consumer may not use weatherization and higher prices to move towards more efficient usage of energy. Consumer changes tend to be short-run adjustments to shortages and cost increases rather than long-run commitments to energy conservation.

The second approach currently in use is to change attitudes. But changing behavior though exhortation or persuasion is difficult in the absence of absolute necessity. Furthermore, the individual often reads coercion into suggestions even when none is intended. Consequently, the impact of advertising on conservation tends to be minimal.

An Alternative Method

Community intervention suggests a strategy of influencing groups rather than individuals. As Stern and Kirkpatrick point out:

> "If groups of people can be induced to conserve before they feel coerced, forces will be set in motion to produce attitude change. . . . The greatest energy conservation was observed (during 1973-1974) in the most cohesive neighborhoods . . . studied. . . . Programs that require local groups to take unified action should have the best chance of promoting energy conservation."

The community intervention model employed in Memphis served to build a formal network of grassroots energy

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concerns, informal neighborhood organizations, and public agencies. A key to the Memphis model is the use of a catalyst or initiator research group. Local communications networks and community beliefs were first uncovered through intensive field research by applied anthropologists. After reviewing the network system and belief structure of the local area, the research group designed a process to bring together the disparate groups and agencies for the purpose of community energy conservation.

Inner-City Issues in Energy Conservation

One basic problem encountered by residents in this neighborhood as well as by many inner-city moderate- to low-income residents is their apparent powerlessness to affect public policy on day-to-day or local issues. This powerlessness has led to consumer alienation from the utility company's community goals. Neighborhood people are suspicious and do not trust advertising, particularly when slick promotions promise "good" deals. Finally, there are no formal channels for resources to meet their basic housing or utility needs, even though their incomes are less adequate to meet these needs than the rest of society. Low-income residents, despite their very real needs, end up rejecting weatherization programs categorically.

Problems of high utility bills and a high incidence of utility cutoffs for low-income families are compounded by a low level of consumer knowledge about energy conservation and substandard housing characterized by inadequate insulation. The realities of high utility bills and a high incidence of utility cutoffs for the low-income resident will not get better. In fact, many residents interviewed for this study had unrealistic notions of how much money could be saved by switching to low-wattage light bulbs. These same residents often lived in houses with major roofing and flooring deficiencies.

Morgenstern and Dubinsky have noted:

> "Experiences from utilities around the country indicate that certain demographic groups are less likely than average to participate in conservation programs. Principal among these groups are the poor, the elderly, renters, and absentee owners. To motivate these groups . . . special efforts would probably be required."

Public policy has developed over the past decade to provide two institutional responses to the volatile issue of higher energy costs for the lower income customer: (1) financial assistance and (2) energy conservation. First, there have been a number of federal, state, and private emergency assistance programs for utility bill payment. In addition to the regular programs of assistance, the Memphis city utility company, Memphis Light, Gas and Water Division (MLGW), has a "Dollar" checkoff system where utility users may donate a dollar each month to provide emergency assistance or weatherization to low-income utility users. Some of these assistance programs are handled by existing agencies; other programs have generated new public and private assistance bureaucracies. The expected short-term payoff to these types of programs has been to lessen hostility of the low-income consumer toward the utility distribution company. However, the long-term effect of these assistance programs is less clear.

Continued use of utility subsidies creates both policy problems and economic efficiency problems. If an increasing number of citizens come to rely on assistance to pay utility bills, the transitional nature of the program disappears as the assistance becomes a permanent part of the welfare system. Economic dependence becomes the norm for a particular segment of the population. The end result is not adjustment to new energy realities, but greater dependence and a greater potential for utility cutoffs during non-subsidy portions of the year.

Parallel with assistance programs, there have developed a series of energy conservation programs that have emphasized reduced energy use, introduced time of day energy management, and encouraged weatherization of dwellings. Participation in these conservation programs has been modest, and the results have provided incremental improvements in energy use. In a recent article Stern notes that in spite of the mass media campaigns to promote energy efficiency, there are inherent shortcomings in promoting these types of programs to the consumer:

> "Advertising a brand of toothpaste may make sense, because consumers are sure to choose some toothpaste, and the advertiser only seeks to influence the brand they choose. . . . But promoting energy efficiency usually requires encouraging new behavior—rather like selling toothpaste to people who have never brushed their teeth."

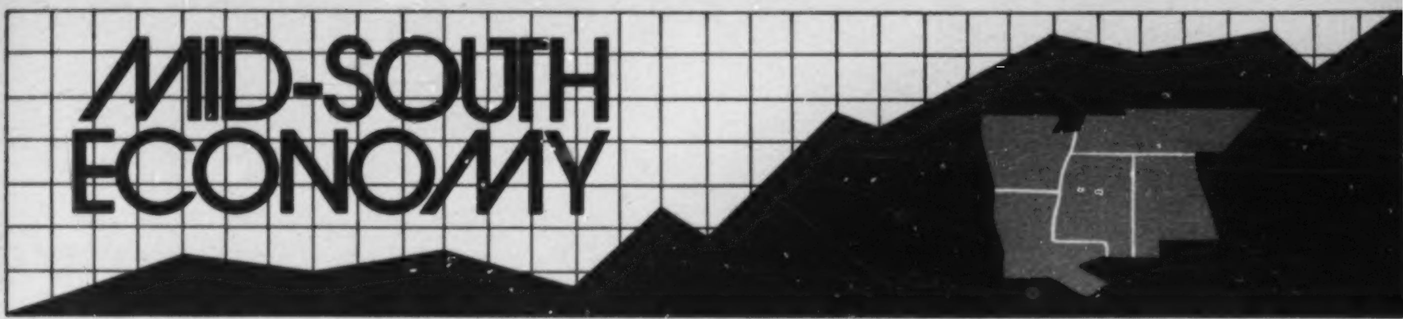
Local Efforts in Energy Conservation Programs

In the Tennessee Valley Authority area, a joint weatherization program was begun in 1977 with the local distributor, Memphis Light, Gas and Water (MLGW). Known as the "Energy Package," customers were offered home energy efficiency surveys; zero-interest, long-term loans for weatherization; and free follow-up inspections to insure the quality of work. The no-interest loans helped finance weatherization from insulation and storm windows to heat pumps, solar water heaters, and passive solar retrofits.

Since 1977, 35.3 percent of the housing units in MLGW's urban service area requested energy efficiency surveys. A slightly lower percentage, 28.4 percent, actually participated in some aspect of the potential energy package. However, a majority of the participants were moderate- to high-income residents of the MLGW service area.

By contrast, low-income neighborhoods have had a much lower survey and participation rate in the "Energy Package" program. In the neighborhood targeted for this study, the pre-1984 survey level was 19.0 percent, and the participation rate was 9.0 percent.

Part of the problem is, of course, the low incomes of the residents in the targeted neighborhood. In addition, home



MID-SOUTH ECONOMY

BUREAU OF BUSINESS & ECONOMIC RESEARCH THE FOGELMAN COLLEGE OF BUSINESS AND ECONOMICS MEMPHIS STATE UNIVERSITY

STATISTICAL SUPPLEMENT

THE MID-SOUTH ECONOMY

The pace of economic activity in the U.S. and Mid-South has slowed since second quarter 1984. For the last nine months, the nation's real Gross National Product expanded at only a 2.2 percent annual rate, well below the 7.1 percent rate recorded over the previous eighteen months. Industrial production has leveled off, and the nation's unemployment rate remains stable at 7.3 percent. Meanwhile, future spending plans of businesses and consumers show signs of weakness. Businesses face cutbacks due to lower operating rates, higher debt ratios, and disappointing profits. Consumers, on the other hand, face cutbacks due to very high installment debt levels relative to disposable personal income and a falling savings rate which dipped below 5.0 percent in first quarter 1985. Moreover, the interest consumers pay to business totaled $89.8 billion in April 1985, an increase of 21.3 percent over last April.

On the plus side, however, many economic observers have adjusted their forecasts and still see reasons to be optimistic. The posture of monetary policy is accommodating a lower interest rate environment, and inflation remains subdued. The Consumer Price Index less food has risen approximately 4.0 percent over the last twelve months. Real personal income continues to grow, up 3.3 percent since last April, and the employment to population ratio remains at a historically high rate of slightly more than 60.0 percent. Even the federal deficit registered some improvement, declining to a $187.0 billion annual rate, due primarily to an increase in revenues. However, the trade deficit, a major drag on the current recovery, continued its upward climb to record a seasonally adjusted annual rate of $27.0 billion in April 1985.

For the Mid-South, total personal income grew 8.3 percent from fourth quarter 1983 to fourth quarter 1984, underperforming the national increase of 9.2 percent. The aggregate unemployment rate for the Mid-South stood at 9.2 percent in April 1985, only 0.1 percent below last April's level. However, sales tax collections, a proxy for retail sales, remain robust for most of the Mid-South states.

Finally, the Commerce Department's Bureau of Economic Analysis recently published their projections for employment growth to the year 2000. From 1983 to 2000, U.S. employment is projected to grow at an annual rate of 1.5 percent. For the Mid-South states, the projected growth rates are as follows: Alabama, 1.1 percent; Arkansas, 1.6 percent; Louisiana, 1.4 percent; Mississippi, 1.2 percent; and Tennessee, 1.4 percent.

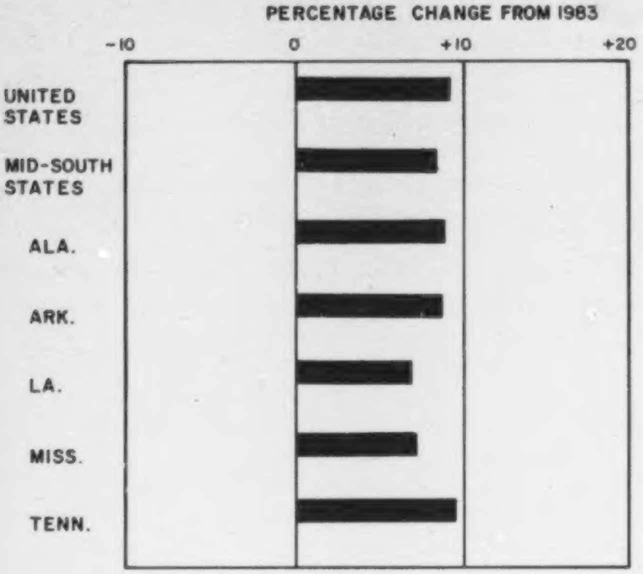
LABOR

The Mid-South civilian labor force totaled 8.1 million in April 1985, an increase of 1.5 percent from a year ago. Total non-agricultural employment registered a gain of 3.0 percent from last April. Manufacturing employment across the Mid-South declined 0.3 percent from the levels of a year ago, with Mississippi registering the only gain, up 1.0 percent. Also, the average weekly hours of production declined throughout the Mid-South region. Non-manufacturing employment registered a solid gain of 3.8 percent over year-ago levels, primarily in the trade and service sectors. While Tennessee and Arkansas had the lowest unemployment rate in the Mid-South at 7.9 percent, Alabama's unemployment rate was the bright spot of the region—the state's jobless numbers fell 14.1 percent from last April and its unemployment rate dipped into single digits for the first time since June 1981. Steel industry recalls and a 7.2 percent rise in construction employment provided the impetus.

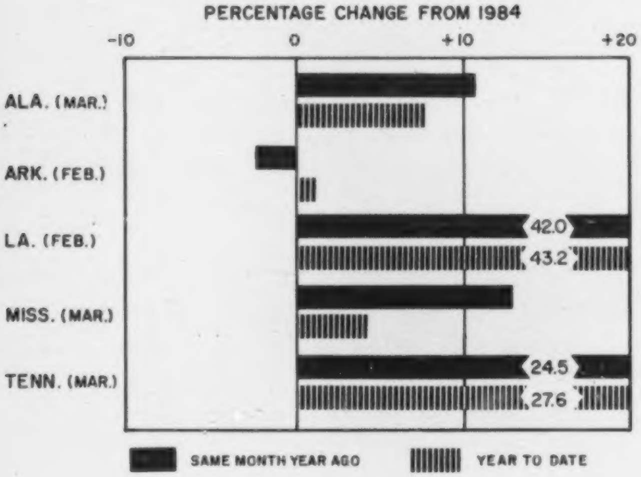
CONSTRUCTION

Construction activity in the Mid-South (excluding Arkansas) registered a mixed performance during the first quarter of 1985. For the twelve-month period ending February 1985, the dollar value of total building permits increased 2.3 percent, compared to a national increase of 10.2 percent. Total building activity in Alabama and Mississippi outpaced the national increase, while Louisiana posted a 5.8 percent decline and Tennessee registered near zero growth. Alabama's growth came primarily from non-residential activity. Mississippi registered solid gains in both residential and non-residential activity, up 15.9 and

PERSONAL INCOME - III QTR. 1984

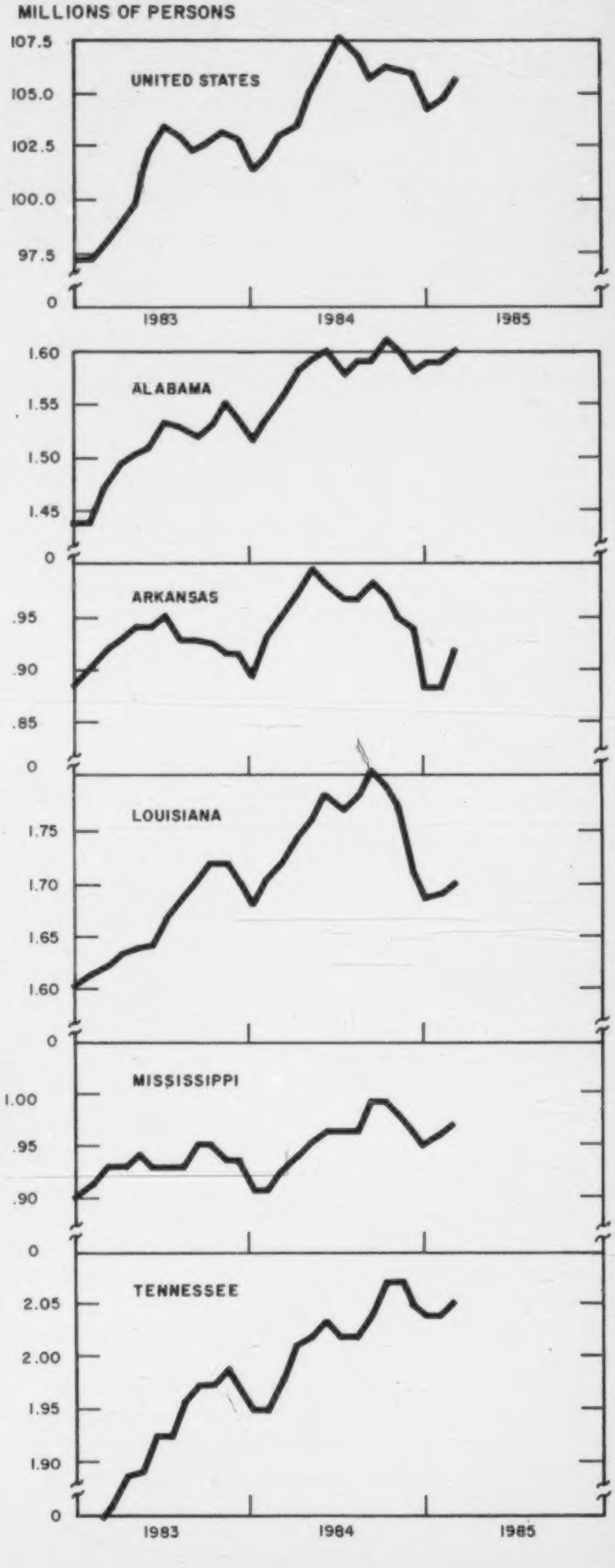


SALES TAX COLLECTIONS 1985



SOURCES: BUREAU OF ECONOMIC ANALYSIS
STATE DEPARTMENTS OF EMPLOYMENT
SECURITY AND REVENUE.

TOTAL EMPLOYMENT



20.4 percent, respectively. Louisiana and Tennessee both recorded declines in non-residential activity of approximately 4.0 percent. Louisiana also registered a decline of 15.9 percent in residential activity, while Tennessee managed a moderate gain of 4.0 percent, primarily in the multi-family sector.

Improvements in the Mid-South's construction employment picture were overshadowed by the 9.8 percent decline in construction employment in Louisiana. Overall, Mid-South construction employment grew only 0.8 percent from the April 1984 level. However, when Louisiana is excluded, Mid-South construction employment was 7.0 percent above year-ago levels and was on par with the increase registered by the nation.

FINANCE

For April 1985, the 180-day commercial paper rate was 175 basis points below the April 1984 level of 10.2 percent, and the 90-day Treasury bill, at 8.0 percent, was 169 basis points below a year ago. However, long-term Treasury bonds are yielding 11.4 percent, only 75 basis points below a year ago. Also, Moody's Aaa bonds are yielding 12.2 percent, just 58 basis points below year-ago levels. By contrast, the yield on Standard & Poor's composite index of 500 stocks is currently a modest 4.4 percent.

Total deposits at Mid-South commercial banks for April 1985 were substantially up across the board, led by solid gains in the growth of time deposits. Nationally, total

LABOR APRIL 1985	United States	Mid-South States				
		Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Civilian Labor Force	114,325,000	1,808,300	1,023,200	1,928,800	1,092,900	2,248,700
Percent Change Year Ago	+ 1.9	+ 1.0	- 1.7	- 0.7	+ 2.8	+11.1
Unemployed	8,150,000	164,400	80,900	216,800	107,900	177,500
Percent Change Year Ago	- 4.4	-14.1	-12.1	+11.2	- 1.7	- 2.4
Unemployment Rate						
1985	7.1	9.1	7.9	11.2	9.9	7.9
1984	8.1	10.7	8.8	10.0	10.3	8.2
Non-Agricultural Wage & Salary Employees	96,731,000*	1,400,000	793,600	1,586,700	844,000	1,846,600
Percent Change Year Ago	+ 3.5	+ 1.5	+ 1.8	- 0.4	+ 3.1	+ 2.6
Manufacturing Employment	19,676,000	353,500	207,900	179,100	220,400	488,100
Percent Change Year Ago	+ 0.7	- 2.2	- 2.7	- 0.4	+ 1.0	- 2.0
Non-Manufacturing Employment	77,055,000	1,046,500	585,700	1,407,600	623,600	1,358,500
Percent Change Year Ago	+ 4.2	+ 2.8	+ 3.6	- 0.4	+ 3.8	+ 4.4
Average Weekly Earnings of Production Workers in Manufacturing	$380.15	$346.83	$295.77	$425.36	$285.76	$331.30
Percent Change Year Ago	+ 2.0	+ 7.1	+ 0.3	+ 1.1	+ 1.3	+ 2.9
Average Weekly Hours of Production Workers in Manufacturing	40.1	40.9	39.7	40.9	39.8	40.8
Percent Change Year Ago	- 2.0	- 0.5	- 2.0	- 2.6	- 2.0	- 0.7
Average Hourly Earnings of Production Workers in Manufacturing	$ 9.48	$ 8.48	$ 7.45	$10.40	$ 7.18	$ 8.12
Percent Change Year Ago	+ 4.1	+ 7.6	+ 2.3	+ 3.8	+ 3.3	+ 3.7

*Seasonally adjusted.

Source: Departments of Employment Security and Survey of Current Business.

CONSTRUCTION[1] FEBRUARY 1985	United States	Mid-South States				
		Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Total Building Percent Change Year Ago	+10.2	+16.1	N.A.	- 5.8	+17.6	+ 0.5
Residential Building Percent Change Year Ago	+ 4.3	- 1.5	N.A.	-15.7	+15.9	+ 4.0
Non-Residential Building[2] Percent Change Year Ago	+18.2	+30.1	N.A.	+ 4.2	+20.4	- 4.3
Total Dwelling Units Percent Change Year Ago	- 2.4	-10.8	N.A.	-28.9	+ 4.0	+ 6.7

[1] Twelve-month cumulative rate.

[2] Non-residential data exclude the cost of construction for publicly-owned buildings.

Source: The Federal Reserve Bank of Atlanta from data supplied by the Bureau of Census.

loans and leases at commercial banks were 13.1 percent higher than year earlier levels, with bank real estate loans climbing 11.9 percent. Meanwhile, mortgage loan activity by Mid-South savings and loans registered a mixed performance. Alabama, Mississippi, and Tennessee recorded solid gains from year-ago levels, while Arkansas and Louisiana experienced substantial declines. Savings and loans across the U.S. also registered a decline in mortgage loan activity, down 9.5 percent from a year earlier. Net savings flows at Mid-South savings and loans were generally down across the region, except for Alabama which registered solid gains from the levels last March.

FINANCE APRIL 1985	United States	Mid-South States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Member Banks as of 4/3/85 Percent Change from Comparable Date							
Total Deposits	+10.2	N.A.	+11.7	N.A.	+ 8.6	+ 6.9	+10.0
Demand Deposits	+ 3.4	N.A.	+ 2.8	N.A.	- 3.0	+ 2.7	+ 1.2
Time Deposits	+12.3	N.A.	+15.4	N.A.	+12.9	+ 9.4	+13.5
Savings Deposits	+11.7	N.A.	+ 9.0	N.A.	+ 7.9	+ 0.2	+ 2.3

Source: The Federal Reserve Bank of St. Louis and the Federal Reserve Bank of Atlanta.

SAVINGS AND LOAN ACTIVITY MARCH 1985	Alabama	Arkansas	Louisiana	Mississippi	Tennessee[1]
Mortgage Loans Made (millions)	$ 94.6	$94.3	$159.6	$60.5	$64.3
Percent Change Year Ago	+ 23.0	-49.2	- 25.8	+35.6	+ 3.7
Percent Change Year-to-Date	+ 13.8	-58.9	- 21.5	+63.3	+17.6
Net Savings Flow (millions)[2]	$105.5	$37.8	$ 96.1	$50.8	$66.8
Percent Change Year Ago	+ 57.9	-70.0	- 58.6	+58.8	-37.3
Percent Change Year-to-Date	+ 84.3	-60.6	- 48.5	- 1.8	-56.5

[1] Figures are for total loans made.

[2] Net savings flow equals new savings received plus dividends credited minus savings withdrawn.

Source: Federal Home Loan Banks of Little Rock, Cincinnati, and Atlanta.

TENNESSEE ECONOMY

From fourth quarter 1983 to fourth quarter 1984, total personal income in Tennessee rose 9.5 percent, while the nation gained 9.2 percent. Sales tax collections for March 1985 were 24.5 percent above year-ago levels, while retail sales across the state turned down, gaining a modest 3.0 percent compared to the national gain of 4.5 percent. However, retail sales growth was particularly strong in the Nashville and Tri-Cities areas. Tennessee's unemployment rate stood at 7.9 percent for April 1985, currently tied with Arkansas with the lowest unemployment rate in the Mid-South. Manufacturing employment lost 10,200 jobs, primarily in the non-durable goods sector. The primary metals, furniture/fixtures, and paper sectors registered substantial gains in employment. Non-manufacturing employment gained 57,500 jobs from last April, primarily in the trade and service sectors. However, government employment declined by 2,300 jobs overall, with federal and state employment gaining 7,300 jobs and local government employment declining 9,600 jobs.

For the twelve months ending February 1985 compared to the same period in 1984, the dollar value of total building permits rose only 0.5 percent compared to the national increase of 10.2 percent. Residential permits climbed 4.0 percent, led by continued gains in multi-family units which are currently growing at an annual rate of 21,900 units. Single-family units remained unchanged at an annual rate of 14,000 units. Non-residential activity declined 5.5 percent, primarily in the stores and schools sectors. Industrial, office, and hospital construction managed to register solid gains from year-ago levels.

Mortgage loans at Tennessee's savings and loans totaled $64.3 million in March 1985, 3.7 percent above last March and 17.6 percent above comparable year-to-date figures. Net savings flows, however, experienced substantial declines from year earlier levels. Commercial bank deposits in Tennessee climbed 10.0 percent over April 1984 levels, led by a 13.5 percent increase in time deposits.

ownership is lower in this area relative to the city as a whole. However, this project focused on the community group communications networks that establish and distribute information about a new product or service in the neighborhood. While the "Energy Package" used the mass media to convince residents of the importance of energy conservation, that method of energy education ignored the more traditional word-of-mouth communications networks typical of the area.

The Memphis Community Intervention Model

In Memphis several groups have been concerned with energy delivery and energy prices in low-income neighborhoods. These groups include the Association of Community Organizations for Reform Now (ACORN), the Midsouth Peace and Justice Center, the Urban League, the Ministerial Association, and the Grey Panthers. Each group has either worked as an Alinsky-type neighborhood organizing group or as a direct intervener on behalf of the low-income residents and in opposition to the policies of the local utility company.

In this instance the utility was concerned not only with low rates of participation in the energy conservation program in a low-income neighborhood, but also it was concerned with the long-term image of the company in the Memphis area. In a joint project the utility and an anthropology research group, the Memphis State University Center for Voluntary Action Research (CVAR), established a pilot project for a new approach to the marketing of utility conservation programs. Previous national and CVAR research had examined the importance of the extended family, church networks, and neighborhood/civic groups to family choices or decision-making.

Based on previous CVAR experience and neighborhood research, the CVAR implementation of the community intervention model sought to accomplish the following tasks in a pilot study of the neighborhood:

1. Determine the type and range of informal social networks from family and church to neighborhood and civic associations;
2. Uncover belief systems of these informal social networks;
3. Suggest appropriate energy conservation programs in light of local beliefs;
4. Develop a coalition of public agencies to interact with the identified informal social networks in the neighborhood;
5. Develop a pool of resources for future projects; and
6. Establish a permanent informal communications system between the neighborhood and relevant public agencies.

Research Results

Numerous grassroots organizations were identified. Organizations of extended families, churches, street corner groups, citizen clubs, community center groups, and homeowners were contacted and involved in the utility's word-of-mouth advertising for this neighborhood. Information concerning each group's problems relative to energy was collected. A pervasive belief system of residents concerning the utility company and energy issues existed in the area. Each group had helped to paralyze energy conservation through the neighborhood networks of "energy facts." Typical of the CVAR findings were the beliefs listed below:

Fatalism: "If I get my house weatherized, it won't make any difference. They are going to raise the rates anyway."

Racism: "I know that the bills are coded for race and that Blacks not only pay more but are disconnected if they don't pay by the second (of the month)."

Power: "Irregardless of what you do, it's all decided downtown."

Conservation: "Older people in our neighborhood watch their lights to keep down utility bills."

Self Reliance: "I don't let anybody do anything for me that I can do for myself. Those no-interest weatherization loans are a handout."

Distrust: "Signing up for a weatherization grant would mean giving up my house to the government."

Holding On: "If things do get worse or continue to increase the cost of living, people will do what they can to hold on. The first area most people will cut will be food. They will hold on to their utilities and telephone as long as they can."

The residents' beliefs led to an expression of consumer behavior that was consistent with a negative attitude toward the company and toward the possibility of effective conservation. They tended to ignore externally financed weatherization and, instead, concentrated on actions that would have little impact on their monthly bills, such as turning off lights. The result was that area public sentiment against the utility rose as rates rose.

The coalition formed through the efforts of the CVAR and MLGW did not change these individual beliefs, but it provided an organizational base that rendered the beliefs moot in the decision as to whether or not conservation efforts should be undertaken. Weatherization grants for a large percentage of participants, plus social emulation, assisted the incentives of the low-income loans to achieve the desired effect in the targeted neighborhood.

In light of the belief systems of the neighborhood residents, MLGW formed a coalition of public agencies to help deliver a conservation program that met the needs through intervention in the groups that shaped behavior, not attitudes, of the neighborhood residents. That process required the networking of informal social groups in the neighborhoods to deliver a more personal energy conservation information package that involved and became part of a neighborhood program of energy conservation.

As an important part of the conservation plan, each concerned public agency assigned staff to work with various groups in the neighborhood. Different agencies organized neighborhood conservation and leadership workshops. Finally, agency staff came to the neighborhood groups to sign up participants in both weatherization and emergency assistance programs. Door-to-door energy information programs were developed for the neighborhood. However, it is important to note that this process involved a redeployment of current utility and agency staff, not a commitment of new employees to a new program.

A key neighborhood outcome was the formation of a formal neighborhood association that became a broker and communications link to informal area social networks. This increase in the official connection with the neighborhoods led to dramatic changes in the local conduct toward the utility. However, these changes were largely facilitated by (1) the network building of the CVAR and (2) the community energy workshops organized by the CVAR and city agencies. The energy workshops presented in the neighborhood included: installation of solar wall heaters, meter reading, senior citizen conservation workshops, school age energy awareness, and entrepreneurship training for local residents wishing to form a weatherization company. Handouts such as thermometers, caulk and caulking guns, ventilation locks, and plastic window covers were made available to residents who completed the workshops.

Weatherization Results

In the first six months of 1984, the CVAR was able to accomplish a dramatic turnaround in conservation in the targeted low-income neighborhood. In the period from 1977 to 1983, there had been 387 energy survey requests from the neighborhood that resulted in 175 weatherized dwelling units. During the first half of 1984, there were 140 survey requests and 278 weatherization units—jumping weatherization units from .56 per week before the project to 10 per week as the project began to act. The overall participation rate moved from a six-year total of 9.0 percent at the end of 1983 to 22.0 percent by the middle of 1984.

In addition to the rapid increase in weatherization, there were some very positive secondary effects. The neighborhood association worked with a coalition of public agencies to effect the reopening of a neighborhood school that had been closed for three years. The neighborhood asked the local Jobs Training Partnership Act (JTPA) agency to assign neighborhood youth hired for summer work to be used for neighborhood work. The result was that summer youth employment was directed toward neighborhood house painting, local weatherization, and consumer energy education. Finally, the neighborhood association signed a contract with the National Association of Neighborhoods and the local county government to initiate a small business that will contract with the government to deliver some government services to the neighborhood.

In light of the economic and social conditions in this neighborhood and the general lack of citizen knowledge about energy conservation, it is too optimistic to conclude that the CVAR model changed energy beliefs. Energy issues seemed to be embedded in other social issues that were immediate concerns to the residents of this low-income neighborhood. On the positive side a coalition of agencies can deal with a neighborhood's social agenda and in the process begin to solve some critical energy issues. The CVAR/MLGW community intervention model did bring weatherization rates up to those of a middle-class neighborhood. On the negative side, the residents still face high utility rates with low incomes, so the likelihood of utility cutoffs is not ameliorated.

Summary

Energy weatherization schemes are as viable in low-income neighborhoods as other areas of a city if the initiative is taken and the methods of communication are appropriate to the area. In Memphis, a low-income neighborhood with a very low participation rate in energy surveys and energy weatherization was turned around, not by a large infusion of funds, but through an improved community network and communications system. The weatherization unit rate changed from a low 9.0 percent to 22.0 percent after only six months of program activity.

Incentives are important to the process of residential weatherization. The consumer, however, makes his decision in a social context. Even low-income utility customers are willing and able to participate at levels similar to other social groups if the incentives are paired to group assistance and social reinforcement.

If energy conservation is an important social goal, subsidies for energy purchases must ultimately be eliminated and replaced with lower levels of energy use. The community intervention model employed by CVAR/MLGW in Memphis provides an example of how current energy programs can be made more effective through improved use of current local resources.

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A NOTE ON WHY TAKEOVERS ARE GOOD PUBLIC POLICY

*Michael Devaney**

Since Berle and Means published "The Modern Corporation and Private Property" in the 1930s, interested parties have been debating the degree of management discretion in the contemporary corporation. The fundamental question has been: "To what extent are managers able to pursue their own goals separate from shareholder welfare?" A common response is that managers, by virtue of being substantial shareholders, are owners and have a vested interest in making decisions that maximize the market value of the firm. Yet, many of these substantial holdings can be attributed to what some minority stockholders consider to be excessively generous stock option programs. As a principle of public policy, the substantial holdings argument is even more nettlesome. If one is to infer that owner management is more efficient, then why did the corporate organizational form become so prominent on the economic landscape? Apparently, even with the existence of managerial abuse, the economic and financial efficiencies of the corporate organizational form dominate.

Public ire over executive compensation in the auto industry as well as golden parachutes[1] and the so-called "greenmail"[2] takeover defense has once again revived the Berle and Means debate. The commentary appearing in the press runs the gamut from those who suggest that "managers make no more than 25 times hourly workers" to compensation specialists who strain their credibility in defense of golden parachutes. They argue that golden parachutes allow managers to bargain from a position of financial security and, therefore, make them more receptive to offers for the firm that benefit shareholders.

The SEC has suggested eliminating parachutes once an offer is tendered. Politicians, recognizing an issue that plays well in Peoria, have sponsored legislation to restrict stock repurchases to bar greenmail buybacks and apply a windfall tax rate to golden parachutes. Aside from involving government in executive compensation, the proposals address the symptoms and ignore the central problem, which is imperfections in the market for corporate control.

Takeover defense has become the hot new specialty in corporate finance. By employing an array of strategies, termed shark repellants in the popular vernacular, the managements of many corporations have successfully insulated themselves from the vagaries of the marketplace. State and local governments that are desperate for tax revenue and jobs will cooperate in obstructing the acquisition of a local firm and the possible relocation of corporate headquarters. State laws will block minority shareholder actions by categorizing a wide range of management behavior under the rubric of "discretionary business decisions" that are beyond challenge. At stockholder meetings around the country, corporate executives have lobbied feverishly to introduce staggered boards and "fair value rules" into the corporate charter. The fair value rule dictates equal payment to all sellers of shares and can substantially increase the cost and risk of an unfriendly takeover by eliminating the use of the two-tiered bid. Companies have also amended charters with "super majority rules" which can require up to 80 percent of voting shares to effect a takeover. The super majority rule is especially interesting at a time when corporate executives are writing papers on the application of management techniques to government administration. This is one the boys in the boardroom stole from government; thankfully, not our government. The "poison pill" is perhaps the most pernicious shark repellant; management simply emasculates the company to the degree that suitors lose interest. The most recent strategy is the "greenmail" repurchase, but others are appearing on the scene almost daily involving complex combinations of stock dividends, warrants, and options all designed for one purpose—to inhibit the transfer of corporate control.

It is easy for politicians and the public to fixate on the issue of abusive executive compensation, but by doing so they neglect a more important point. Millions of American workers have been forced to accept wage cuts as a concession to a more competitive international economy; those less fortunate have watched their jobs disappear. These sacrifices may have little impact on a company's

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competitive world position if there is no market mechanism for displacing an entrenched, incompetent management. Mergers also benefit investors. Perhaps the most robust test in merger research is the superior returns that accrue to shareholders of the acquired firm. Shark repellants increase the likelihood that a tender offer will fail and, therefore, discourage potential offers. This can suppress equity prices and drive investors into alternative investment media, denying firms badly needed capital. It should not be construed that the management of acquired firms are in most cases incompetent; in many situations they represent superior management talent. Certainly, this group of managers will argue their case before stockholders and the investment community and will undoubtedly affect the outcome of many tender offers. However, superior or otherwise, management does *not* have the right to restrict the number of tender offers initiated, each of which represents valuable information to the investing public and results in a more efficient market.

What to Do

Public policy should promote competition in the market for corporate control rather than address the symptoms in the piecemeal fashion currently proposed. For example, in a competitive market there would be no need for laws limiting golden parachutes after an offer is tendered. Such parachutes simply constitute bribes to management to acquiesce to the takeover. Without the benefit of Draconian defenses, the economic value of executive obstructionism would approach zero. Firms employing such drastic defenses could be required to disclose this information in their financial statements. The management of private pension funds, which own 38 percent of corporate securities in the U. S., should be placed on notice that purchase of the securities of firms employing these strategies may risk liability under ERISA.[3] Mr. Monks, Chief of the Labor Department's Pension and Welfare-Benefits Program, has already taken the lead in urging pension fund activism in takeovers. Most important, legislation is needed to address the so-called business judgment rule and impose personal liability on directors for their decisions.

There is a perception shared by many that merger always confers monopoly power and, therefore, should be discouraged. Government and public opinion which has been molded by a populist tradition hostile to business combinations needs to reevaluate the social benefits/costs of merger. The economic theory of industrial organization has undergone a revolution which questions many of the old premises.[4] The new view concludes that even highly concentrated markets may be more competitive than economists once thought. Traditional interpretations of "monopoly power" make less sense in today's international economy and may even weaken our ability to compete in world markets. More than a few have concluded that the main beneficiary of public policy in merger has not been the consuming public but an army of lawyers and economists who have been known to grow old litigating a single case. Government would still vigorously prosecute price fixing, predatory pricing, etc., but except in extreme circumstances would allow the market dynamic to establish the structural organization of industry.

Some experts warn that any change in the current system would unleash a merger wave that would have us all working for the same conglomerate, all owing our soul to the company store. In truth, mergers are like marriages. Some coexist in a mood of quiet indifference, while others are hugely successful resulting in a long-term relationship that is mutually beneficial. Still others are abject failures that threaten to drag both parties down unless rectified by a spin-off or divestiture, the corporate equivalent of divorce. A more competitive market for corporate control might escalate the frequency of merger, increase the number of leveraged buyouts, and spark the return of some firms to private ownership; but it will almost certainly instill in corporate management a new awareness of the rights of stockholders, and that would be good.

Footnotes

[1] Golden Parachute—compensation bestowed on top corporate executives in the event of a change in corporate ownership. Some have been negotiated after a tender offer has been made. A subsection of the so-called Deficit Reduction Act of 1984 titled "Golden Parachutes" imposes a windfall tax on large compensation contracts triggered by a change in corporate ownership.

[2] Greenmail—a takeover defense involving the repurchase of the company's own stock. The Senate Banking, Housing and Urban Affairs Committee supported a bill to bar companies from paying more than the market price to repurchase stock from anyone owning more than 3 percent of any class of securities unless the stock has been held more than two years. The problem with the bill is that stock repurchases, even at a premium, are not always detrimental to stockholders.

[3] ERISA—Employment Retirement Income Security Act of 1974 established the "Prudent Man Rule" for pension management and imposes liability on those who fail to act in the membership's best interests.

[4] This refers to the "Contestable Markets" theory associated with the work of William Baumol and others.

MANUFACTURING MANAGERS AND THEIR SHIFTING DECISION-MAKING PROCESS

*Satish Mehra**

The effectiveness and efficiency of manufacturing operations can be gauged through at least three criteria: productivity, quality, and customer service. Each of these criteria has received increasing attention during the past few years. The productivity issue, in particular, has generated a great deal of interest in the popular press (Winter, 1980; "Special Report on the Productivity Crisis," 1980), in trade publications (Sumanth, 1981; Sumanth & Einspruch, 1980), and in scholarly journals (Andrew & Kennedy, 1981; Reilly & Fuhr, 1983). The related issues of quality and customer service are also being addressed with increasing fervor, though apparently less intensively than the productivity issue.

Given this continually increasing interest in productivity, quality, and customer service, it seems worthwhile to explore why this has occurred. One plausible explanation is that productivity, quality, and customer service have become more and more difficult to successfully realize within manufacturing organizations. At the same time, it is becoming increasingly crucial for manufacturing organizations to attain these outcomes. The difficulty in, and importance of, obtaining these outcomes may be traced back to changes within manufacturers' decision environments which have imposed increasingly stringent constraints upon both manufacturing operations and manufacturing managers' decision-making behaviors. It appears that these environmental constraints influence manufacturing managers' decision-making behaviors; and these behaviors, in turn, affect the productivity, quality, and customer service outcomes of the manufacturing management process.

Objectives

It is believed that there is a complex set of decision-making behaviors which links environmental constraints, such as competition, customer demands, and costs, with productivity, quality, and customer service outcomes. In the remainder of this article a model is proposed which describes how these environmental constraints influence managerial decision-making behaviors and how these behaviors, in turn, affect productivity, quality, and customer service variables. The proposed model was developed both from an analysis of personal observations of changes in manufacturing environments over the last few years and from an analysis of data generated in interviews with production and materials management executives in different manufacturing organizations.

Methodology

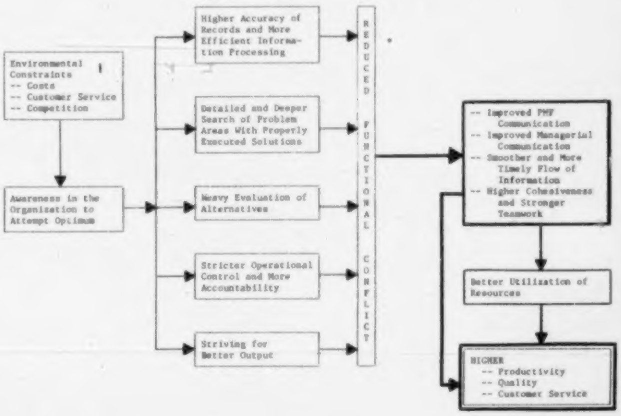
The basic methodology utilized in this project involved randomly selected manufacturing organizations. Within each organization a number of production and materials management executives and other personnel (at least middle management level) were interviewed, at least once, to gather information on the changing pattern of their decision-making process. The information obtained was analyzed and synthesized to form the hypothesized model presented in this article.

The Model and Discussion

Figure 1 presents the proposed model for the managerial decision-making process as it has evolved over recent

Figure 1

PROPOSED MODEL FOR MANUFACTURING MANAGERS' DECISION-MAKING PROCESSES


Environmental Constraints
-- Costs
-- Customer Service
-- Competition
Awareness in the Organization to Attempt Optimum
Higher Accuracy of Records and More Efficient Information Processing
Detailed and Deeper Search of Problem Areas With Properly Executed Solutions
Heavy Evaluation of Alternatives
Stricter Operational Control and More Accountability
Striving for Better Output
REDUCED FUNCTIONAL CONFLICT
-- Improved PMF Communication
-- Improved Managerial Communication
-- Smoother and More Timely Flow of Information
-- Higher Cohesiveness and Stronger Teamwork
Better Utilization of Resources
HIGHER
-- Productivity
-- Quality
-- Customer Service

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years in response to constraints in the manufacturing environment.

In recent years significant changes have occurred within the decision environments encountered by manufacturing organizations. Most notably, manufacturing organizations have faced increased competition; increased customer demands with regard to price, quality, and lead times; and increased costs for money, equipment, inventories, etc. As these environmental constraints become more severe and more critical, managers of manufacturing organizations appear to have become much more sensitive to their own vulnerability. Consequently, concerns about the needs for organizational (and individual) survival seem to have assumed an increasingly dominant role in manufacturing managers' decision-making behaviors. In short, the environmental constraints in the organizations have created an awareness for organizations (as well as individuals) to survive. Based upon this reasoning then, it may be hypothesized that organizations have become aware of the constraints, and it is recognized that there will have to be reaction/proaction on the part of managers to review (and modify/change) their decision-making behavior. The findings of this project show that there is supporting evidence for the fact that managerial decision-making behavior is changing.

Optimizing and satisficing are but two of the various managerial decision-making strategies. This study found, however, there is much more emphasis upon achieving optimum "levels" in various manufacturing areas. It is believed that satisficing is not enough anymore: one has to at least attempt to reach for the best.

There have been various attempts by manufacturing managers to attain optimization. This includes greater emphasis on the accuracy of all records pertaining to manufacturing and then using the information in an efficient manner for better decision making: lesser second guessing, lesser use of judgmental aspects, and more use of reliable information.

Secondly, once a problem area has been identified, it is then thoroughly analyzed to the deepest level without regard to the extent and seriousness of the problem. This deeper analysis leads to better understanding of the problem, which in turn provides a methodology to solve the problem. Problem solutions, once designed, are carefully monitored during their implementation. Any feedback is immediately analyzed, and the problem solution is modified for better effectiveness.

Thirdly, managers, and organizations as a whole, are now exercising very strict operational control on their departmental activities, including heavier accountability on their subordinates. This, as the study found, represents an attempt to achieve an effective decision-making process by using reliable, accountable, and timely information. Next, managers are using multiple decision criteria to extensively evaluate various alternatives that exist to solve any problematic area. Quick-fix and one-try solutions are being discouraged.

Finally, a serious effort is being made to reach for better results/output in all areas of the organization. This includes better forecasting, more usable information, stronger planning tools, and better output product and/or service. There seems to be a "total effort" to strive for "total good" for the individual, the department, and the organization.

Once a total effort/total good concept is operational with the other changes, one finds that there is a stronger reduction in the functional conflict. To a large degree this reduction is the result of an improved decision-making process where "doing more with less" is a fundamental premise. This reduced conflict has the following sustaining effects:

1. Definite improvement in the communication between production/marketing/finance (PMF) functions of an organization.
2. Improved communication between departmental managers.
3. Smoother and more timely flow of information between functional areas.
4. Cohesiveness among individuals (across functions) who, through teamwork, strive toward better output.

As the proposed model in Figure 1 depicted, the end result of all the above-mentioned facts is better utilization of resources—once again, doing more with less is the name of the game. Finally, the total efforts result in higher productivity, quality, and better customer service.

Summary

During the past few years, managers within manufacturing organizations appear to have become increasingly concerned about the effectiveness and efficiency of their operations in terms of productivity, quality, and customer service. Major contributors to these effectiveness and efficiency concerns apparently are the increasingly demanding environmental constraints regarding competition, customers, and costs. Yet, the relationship between these environmental constraints and productivity, quality, and customer service is not a simple one. Rather, a complex set of variables intervenes between these changing environmental constraints and the changes in productivity, quality, and customer service. This complex set of variables includes: (1) manufacturing managers' concerns about the need for organization, department, and individual survival; (2) manufacturing managers' usage of decision-making behaviors which reflect more optimizing and less satisficing criteria; and (3) various organizational communication links which result from manufacturing managers' decision-making processes. This article proposed a conceptual model which links this complex set of variables to both the environmental constraints and the productivity, quality, and customer service considerations of manufacturing organizations, as well as the associated decision-making process. Even through the model was derived from personal observations of manufacturing operations and from interviews with managers in several manufacturing organizations, further empirical research must be conducted to fully test the model's validity.

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AUDIT CLIENTS' PERCEPTIONS OF THE INDEPENDENCE OF THEIR CPA

M. Frank Barton[*]

The accountant's role and range of services have expanded rapidly in recent decades. Public accountants are being pressured to review and report on and to assume some degree of responsibility for an increasing amount of information which may not be a part of financial statements but is included in annual reports. Accountants can be expected to play a greater role in both profit and non-profit entities as their activities increase in number and in complexity. The rapid expansion of the management services activities provided to both public and private entities by public accounting firms is evidence of an increasing need for professional help far beyond the capacity of in-house employees. This is true for large national firms as well as small firms. Neither can support the payroll of all of the many talents required to operate business and service activities in today's technically oriented society.

In this period of rapid expansion of the public accountant's role in the public and the private sectors, others' perceptions of the accountant and whether or not he/she is truly "independent" must be recognized. The public accountant has a client/professional relationship and a professional/public relationship all growing from the same piece of work. Regulatory bodies such as the SEC have placed, in many cases, specific reviewing and reporting requirements on the public accountant so that the public (external users) is protected and served. Can the public accountant analyze and report on data and be equally responsible to both the audit client and to third parties? The point of "duality"—how well public accountants meet the duality responsibility inherent in their profession—is a matter of vital importance to both the public and private sectors that they serve. In addition to the duality problems, the emergence of management service as a distinct area of a public accountant's practice has raised the question of whether a certified public accountant who acts as a management consultant might be creating a conflict of interest when the accountant also performs audit service for the same client.

This article considers the conflict that has existed in the public accounting profession dating back to the profession's earliest days, the conflict of dual responsibility and the threat to independence inherent in this dual responsibility to public and client.

As Others See Their Public Accountant/Auditor

During these periods of rapid expansion of work functions and work units, has the quality of work been maintained by the independent auditor? In a survey by Opinion Research Corporation released to the press in late June 1984, the opinion was that, "Despite sometimes strong criticism, the public accounting profession enjoys a reputation for high-quality work, independence and objectivity, and ethics."[1] The report went on to comment:

> "Auditors received a larger percentage of 'excellent' and 'good' ratings on ethical-moral practices than other professional groups selected for the survey. They were followed by college-university professors, bankers, and doctors. Those who received more criticism than praise were lawyers, stockbrokers, insurance agents, television newscasters, and U.S. senators and congressmen."[2]

The survey also found:

> "While outright criticism of the profession was limited, auditors were criticized for sometimes 'bending the rules.' Overall, 39% of those surveyed—and 34% of corporate executives—think that the profession yields too easily to client pressure."[3]

There were 2,024 participants in the survey which included 731 chief executives, 145 security analysts, 124 portfolio managers, 162 lawyers, 100 regulatory officials, 65 congressional administrative assistants, 246 media professionals, and 300 stockholders.

There is considerable evidence that the independent auditor is a most respected member of the business world as presented in the survey by Opinion Research Corporation. To retain that respect, and possibly increase the perception of the general public of a job well done, is a continuing challenge to the profession. Both the public and private sectors have an interest in maintaining a high

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degree of public trust in the work of auditors. To that end Congressman John D. Dingell, Chairman of the House Energy and Commerce Committee, on February 20, 1985, convened the first of a series of hearings into the "effectiveness of independent accountants who audit publicly owned corporations" and the "performance of the Securities and Exchange Commission in meeting its auditing and accounting responsibilities."

> "Congressman Dingell opened the hearings by conveying the subcommittee's regard for the 'ideals of independence and public responsibility' essential to the role of the independent auditor. 'No amount of technical expertise can make an auditor effective if those essential ideals are missing or weakened,' he stated. 'It is not enough that financial statements be accurate; the public must also perceive them as being accurate. Public faith in the reliability of financial statements depends upon public perception of the outside auditor as an independent professional."[4]

Those asked to appear at the hearings included: John S. R. Shad, chairman of the Securities and Exchange Commission; Arthur M. Wood and A. A. Sommer, Jr. on behalf of the public oversight board (POB) of the AICPA division for CPA firms; AICPA president Philip B. Chenok; and Eli Mason, managing partner of Eli Mason & Co., New York City, and chairman of the National Conference of CPA Practitioners.

Study Objective and Design

The data used in this article were collected as part of a broader survey dealing with audit clients' perceptions of the intensity of need for services and quality of service provided by their independent CPA. This article considers the audit client's confidence in the services provided by the independent CPA considering the duality of the accounting profession, i.e., the CPA performs services for the clients, and the CPA firm at the same time represents the public in the audit of financial statements. Is the independent auditor truly independent?

The Sample

There are about 4,800 businesses in Memphis listed in *Who's Who in Memphis,* published by Rodney Baber & Co. The sample consisted of 200 firms selected randomly from that publication. Of the 200 questionnaires mailed, 44 usable replies were received. Because of the central limit theorem of statistics, a sample size of at least 30 is considered adequate to estimate the mean of a population. The response rate received is considered sufficient for the purposes of the study.

The Data and Analysis

Non-Audit Service

Respondents were asked to indicate their perceptions of the independence of their principal CPA firm regarding the provision of non-audit services when at the same time providing traditional services. CPA clients' answers are shown in Table 1. Memphis firms were found to be much more confident in the continued independence of their CPA when providing both management advisory services and audit services than were investment bankers and financial analysts. Other variables may have been introduced that affected clients' perceptions of their CPA. Smaller communities may believe that they know and are more familiar with a wide range of business associates than larger urban areas and can place more trust in their professional performances. Only 7.0 percent of the Memphis-based clients were concerned with the independence of their CPA when performing non-audit services as compared with about one-third of the investment bankers and financial institutions.

Table 1
CLIENTS' PERCEPTIONS OF CPA'S INDEPENDENCE WHEN NON-AUDIT SERVICES ARE PROVIDED

	Improves Independence			No Effect	Destroys Independence			No Answer
	1	2	3	4	5	6	7	
Responses	3	3	2	28	2	1	0	5
Percent	7	7	5	63	5	2	0	11

Public Accounting as a Profession of Duality

Respondents were also asked to indicate their confidence in their independent CPA knowing that the CPA is required by various regulatory bodies to serve the public while at the same time providing contract services to clients. CPA clients' views concerning the effect of their profession of duality on the independence of the independent CPA are presented in Table 2, "Clients' Level of Confidence in Their Independent CPA: A Profession of Duality."

Table 2
CLIENTS' LEVEL OF CONFIDENCE IN THEIR INDEPENDENT CPA: A PROFESSION OF DUALITY

Item	Number	Percent
Very Confident	13	30
Confident	24	55
Do Not Know	1	2
Doubtful	1	2
Very Doubtful	0	
No Answer	5	11

There are some doubts in the minds of audit clients about the independence of CPAs performing both non-audit and audit services for the same client. However, these doubts do not appear widespread or a threat to the profession of public accounting at this time. Accountants should be aware of the continuing need to be constantly aware of the auditor's public image.

The effect of the "duality" of responsibility of the profession received fewer negative responses than did the non-audit service questions. It appears that firms have clearly accepted the concept that public accounting firms serve both the client and the public and that the client is comfortable with this dual responsibility of CPA firms.

Conclusions

> ". . . it is of utmost importance to the profession that the public generally shall maintain confidence in the objectivity of certified public accountants in expressing opinions on financial statements. In maintaining this public confidence, it is imperative to avoid relationships which may have the appearance of a conflict of interest."[5]

The above states the generally accepted position of accounting regulatory bodies concerning the standards of performance for independent auditors/CPAs and the client/public relationship. Even though, according to the findings of the Opinion Research Corporation, accountants are probably the most respected among professionals, it is not necessarily good enough. The profession must continually maintain a watchdog outlook on its members and constantly seek improvement—never accept the status quo.

Footnotes

[1] News Report, "Independent CPAs Evaluated in Opinion Research Corporation Survey," *Journal of Accountancy*, August 1984, p. 2.

[2] Ibid.

[3] Ibid.

[4] News Report, "Congressional Subcommittee Convenes Hearings into SEC, Accounting Profession," *Journal of Accountancy*, April 1985, p. 12.

[5] AICPA's Ethics Committee Opinion No. 12.

MID-SOUTH ASSOCIATION OF BUSINESS ECONOMISTS

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3. To develop and bring into sharper focus the contributions which trained economists can make in the business firm.
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